AGRICULTURE

We offer two Agriculture Career Pathways. The first one is Agricultural Business & Management (01.0100). Courses included in this program are Introduction to the Agriculture Industry, Supervised Agriculture Experience I, Agricultural Business Management, Agricultural Mechanics and Technology, Biological Science Applications in Agriculture Plant/Animal Science, and Supervised Agricultural Experience II. The second pathway is Horticulture (01.0600). Courses included in this program are Introduction to the Agriculture Industry, Basic Horticultural Science, Supervised Agricultural Experience I, Greenhouse Production and Floral Design, Landscaping and Turf Management, Horticultural Production and Management, and Supervised Agricultural Experience II.

Career Pathways in Agricultural Education

Orientation Level Classes
9th & 10th Grade

Agricultural Business & Management

Introduction to the Agriculture Industry
Supervised Agricultural Experience I

Horticulture

Introduction to the Agriculture Industry
Basic Horticultural Science
Supervised Agricultural Experience I

Preparation Level Courses
11th & 12th Grade

Agricultural Business Management
Agricultural Mechanics & Technology
Biological Science Applications in Agriculture
Plant/Animal Science
Supervised Agriculture Experience II
Greenhouse Production & Floral Design
Landscaping & Turf Management
Horticultural Production & Management
Supervised Agricultural Experience II

Introduction to the Agricultural Industry **(16001)**

Grade 9-10 1 Year 1 Credit

This orientation course provides an opportunity for students to learn how the agricultural industry is organized; its major components; the economic influence of agriculture at state, national and international levels; and the scope and types of job opportunities in the agricultural field. Basic concepts in animal science, plant science, soil science, horticulture, natural resources, agribusiness management, agricultural mechanics, agricultural biotechnology, food science technology, environmental science and aquacultural science and technology will be presented. Improving computer and workplace skills will be a focus. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration and reinforcement of academic concepts.

Supervised Agricultural Experience I **(16011)**

Grade 9-10 1 Year ½ Credit

This experience program is for students in 9th and 10th grades. Students receiving credit in this area must be enrolled in an agriculture class all year. Students will have a minimum of one approved project or acceptable plans for a project. Supervised study, project record book, training plans, training agreements, report writing, and instructor project visitation and supervision are essentials of this SAE. Course work and evaluation will be implemented in each agriculture course.

Agricultural Business Management I & II **(10505 & 10506)**

Grade 11-12 1 Year 1 Credit
Prerequisite: "C" or better in Introduction to the Agriculture Industry, Basic Horticulture Science, or Instructor Approval

This course will develop students' understanding of the agricultural industry relating to the United States and World marketplace. Instructional units include: marketing and trading of agricultural products, international agriculture, imports and exports, agricultural law, taxes, governmental regulations and policies, and advanced computerized record keeping. Student skills will be enhanced in math, reading comprehension, and writing through agribusiness applications. Employability skills will be developed with resume writing and interviewing techniques to gain employment. Post-secondary education will be explored at agricultural colleges and universities. Improving computer and workplace skills will be a focus. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration and reinforcement of academic concepts.

This course fulfills Consumer Education graduation requirements

Agricultural Mechanics & Technology I & II **(16019 & 16021)**

Grade 11-12 1 Year 1 Credit
Prerequisite: "C" or better in Introduction to the Agriculture Industry, Basic Horticulture Science, or Instructor Approval

This course will concentrate on expanding student's knowledge and experiences with agricultural mechanics technologies utilized in the agricultural industry. Units of instruction included are: design, construction, fabrication, maintenance, welding, electricity/electronics, internal combustion engines, hydraulics, and employability skills. Careers of agricultural construction engineer, electrician, plumber, welder, equipment designer, parts manager, safety inspector, welder, and other related occupations will be examined. Improving workplace and computer skills will be a focus. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration and reinforcement of academic concepts.

Supervised Agricultural Experience II **(16012**)

Grade 11-12 1 Year ½ Credit
Prerequisite: Supervised Agricultural Experience I or Instructor Approval

This experience program is for the 11th and 12th grade agriculture students. The opportunities and responsibilities are similar to those of SAE I with one exception that the experiences are conducted at a more advanced level of skill training. The projects should be expanded as the student progresses through the agricultural program. Course work and evaluation will be implemented in each agriculture course.

Biological Science Applications in Agriculture Plant Science **(10507)**

Grade 11-12 1 Semester ½ Credit
Prerequisite: "C" or better in Introduction to the Agriculture Industry, Basic Horticulture Science, or Instructor Approval

This course is designed to reinforce and extend students understanding of science by associating basic scientific principles and concepts with relevant applications in agriculture. Students will examine major phases of plant growth and management in agriculture and the specific biological science concepts that govern management decisions. Topics of study are in the areas of **initiating** plant growth – germination, plant sensory mechanisms, enzyme action, absorption, and **managing** plant growth – photosynthesis, respiration, translocation, metabolism, and growth regulation. The course will be valuable preparation for further education and will increase the relevance of science through the applied setting of agriculture by enhancing literacy in science and the scientific process. Improving computer and workplace skills will be a focus. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration and reinforcement of academic concepts.
(Fulfills Lab Science University Entrance Requirement)

Biological Science Applications in Agriculture Animal Science **(10508)**

Grade 11-12 1 Semester ½ Credit

Prerequisite: "C" or better in Introduction to the Agriculture Industry, Basic Horticulture Science, or Instructor Approval

This course is designed to reinforce and extend students understanding of science by associating scientific principles and concepts with relevant applications in agriculture. Students will examine major phases of animal agriculture and specific biological science concepts that govern management decisions in the animal industry. Topics of study are in the areas of **growth and development of animals** – embryology, ethology, nutrition, immunity systems, and **processing animal products** – preservation, fermentation, and pasteurization. The course will be valuable preparation for further education and will increase the relevance of science through the applied setting of agriculture by enhancing literacy in science and the scientific process. Improving computer and workplace skills will be a focus. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration and reinforcement of academic concepts. *(Fulfills Lab Science University Entrance Requirement)*

Basic Horticultural Science **(16003)**

Grade 10 1 Year 1 Credit

Prerequisite: "C" or better in Introduction to the Agriculture Industry, or Instructor Approval.

This course is designed to develop knowledge and skills in the following areas: using soil and other plant growing media; identifying horticultural plants; propagating horticultural plants; basics of growing horticultural plants in greenhouse and nursery settings; constructing, maintaining and using plant-growing structures; operating, repairing and maintaining equipment used in the horticultural field. Improving computer and workplace skills will be a focus. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration and reinforcement of academic concepts.

Greenhouse Production & Floral Design **(16020)**

Grade 11 – 12 1 Year 1 Credit

Prerequisite: "C" or better in Introduction to the Agriculture Industry, Basic Horticulture Science, or Instructor Approval

***This course is offered on even numbered graduation years**

This course focuses on the greenhouse management, floral design and related segments of the horticulture industry. Major units of study include floriculture plant identification, greenhouse structures, and the culture of greenhouse crops. Also included are care and handling of cut flowers, principles of art applied to floral design, and the mechanics of floral design. Agribusiness units will be introduced in merchandising, advertising, sales, and operating a retail floral business. Improving computer and workplace skills will be a focus. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration and reinforcement of academic concepts. *This course fulfills science graduation credit*

Landscaping & Turf Management **(16005)**

Grade 11 – 12 1 Year 1 Credit

Prerequisite: "C" or better in Introduction to the Agriculture Industry, Basic Horticulture Science, or Instructor Approval

***This course is offered on odd numbered graduation years**

This advanced course focuses on the landscape, nursery, and turf segments of the horticulture industry. Units of student include: identifying landscape plants, designing landscape plans, hardscape construction techniques, and installing landscape plants. Also included are nursery production, turfgrass production, small engine repair, and maintenance of existing landscapes. Agribusiness units will cover calculating prices for work, managing a horticulture business, advertising, and sales. Improving computer and workplace skills will be a focus. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration and reinforcement of academic concepts. *This course fulfills science graduation credit*

Horticultural Production & Management (Adv Hort) **(16007)**

Grade 11 – 12 1 Year 1 Credit

Prerequisite: "C" or better in Greenhouse Production & Floral Design or Landscape & Turf Management or Instructor Approval

This advanced course offers instruction in both the floriculture and landscape areas of horticulture. Units of study include plant identification, greenhouse management, culture of greenhouse crops, care and handling of cut flowers, and floral design. Also included are landscape design, installation, and maintenance; horticulture mechanics; nursery management; and turf production. Agribusiness units will cover operating a horticultural business, pricing work, advertising, and sales. Improving computer and workplace skills will be a focus. Participation in FFA student organization activities and Supervised Agricultural Experience (SAE) projects is an integral course component for leadership development, career exploration and reinforcement of academic concepts. *This course fulfills science graduation credit*