Agriculture, Food, and Natural Resources Courses Descriptions

Principles of Agriculture, Food, and Natural Resources TEA # 13000200 Course # 0500

Grade Placement: 9-12
Credit: 1

This course allows students to develop knowledge and skills regarding career and educational opportunities, personal development, globalization, industry standards, details, practices, and expectations.

Advanced Animal Science (Honors) TEA # 13000700 Course # 0525

Grade Placement: 11–12
Credit: 1
Prerequisites: Biology and Chemistry or Integrated Physics and Chemistry (IPC); Algebra I and Geometry; and either Small Animal Management, Equine Science, or Livestock Production

This course examines the interrelatedness of human, scientific, and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences.
Note: This course can satisfy a science credit requirement for students on the Foundation High School Program. Students are encouraged to meet with their Academic Counselor to ensure they are following the appropriate science course sequence and can apply this course to their science graduation requirements.

Advanced Floral Design TEA # N1300270 Course # 0505

Grade Placement: 11–12
Credit: 1
Prerequisite: Floral Design

In this course, students build on the knowledge from the Floral Design course and are introduced to more advanced floral design concepts, with an emphasis on specialty designs and specific occasion planning. This course focuses on building skills in advanced floral design and providing students with a thorough understanding of the design elements and planning techniques used to produce unique specialty floral designs that support the goals and objectives of a specific occasion or event. Through the analysis and evaluation of various occasion and event types, students explore the design needs and expectations of clients and propose and evaluate appropriate creations. From conception to evaluation, students are challenged to create and design appropriate specialty floral designs that meet the needs of the client. Furthermore, an emphasis on budgetary adherence and entrepreneurship equips students with many of the necessary skills needed for success in floral enterprises.

Agribusiness Management and Marketing TEA # 13000900 Course # 0521P

Grade Placement: 10-12
Credit: 1

This course is designed to provide a foundation to agribusiness management and the free enterprise system. Instruction includes the use of economic principles such as supply and demand, budgeting, record keeping, finance, risk management, business law, marketing, and careers in agribusiness.
Note: This course is only offered once every three years and has a competition requirement.

Agricultural Equipment Design and Fabrication TEA # 13002350 Course # 0508

Grade Placement: 11–12
Credit: 1
Recommended Prerequisite: Agricultural Mechanics and Metal Technologies

In this course, students will acquire knowledge and skills related to the design and fabrication of agricultural equipment.

Agricultural Leadership, Research, and Communications TEA # N1300266 Course # 0523P

Grade Placement: 10–12
Credit: 1
Prerequisite: One credit from courses in the Agriculture, Food, and Natural Resources Career Cluster

Agricultural Leadership, Research and Communications will focus on challenging Agriculture, Food, and Natural Resources (AFNR) students to use higher level thinking skills, develop leadership abilities, employ standard research principles, and communicate agricultural positions effectively with all stakeholders.
Note: This course is only offered once every three years and has a competition requirement.

Agricultural Mechanics and Metal Technologies TEA # 13002200 Course # 0502

Grade Placement: 10–12
Credit: 1
Recommended Prerequisite: Principles of Agriculture, Food, and Natural Resources

Agricultural Mechanics and Metal Technologies is designed to develop an understanding of agricultural mechanics as it relates to safety and skills in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete, and metalworking techniques. To prepare for careers in agricultural power, structural, and technical systems, students must attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the industry; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations.

Agricultural Power Systems TEA # 13002400 Course # 0520 & 2520

Grade Placement: 11–12
Credit: 2
Recommended Prerequisite: Principles of Agriculture, Food, and Natural Resources

Agricultural Power Systems is designed to develop an understanding of power and control systems as related to energy sources, small and large power systems, and agricultural machinery. To prepare for careers in agricultural power, structural, and technical systems, students must attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the workplace; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations.

Equine Science TEA # 13000500 Course # 0509

Grade Placement: 10-12
Credit: 0.5

In Equine Science, students will acquire knowledge and skills related to equine animal systems and the equine industry. Equine Science may address topics related to horses, donkeys, and mules.

Floral Design TEA # 13001800 Course # 0503

Grade Placement: 11–12
Credit: 1

Floral Design is designed to develop students' ability to identify and demonstrate the principles and techniques related to floral design as well as develop an understanding of the management of floral enterprises. Through the analysis of artistic floral styles and historical periods, students will develop respect for the traditions and contributions of diverse cultures. Students will respond to and analyze floral designs, thus contributing to the development of lifelong skills of making informed judgments and evaluations.
Note: This course can satisfy a fine arts credit requirement for students on the Foundation High School Program.

Landscape Design and Management TEA # 13001900 Course # 0522

Grade Placement: 10-12
Credit: .5

Landscape Design and Management is designed to develop an understanding of landscape design and management techniques and practices. To prepare for careers in horticultural systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to horticultural systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations.
Note: This ½ credit course is paired with the Turf Grass Management ½ credit course.

Livestock Production — TEA # 13000300 — Course # 0504

Grade Placement: 11-12
Credit: 1

In Livestock Production, students will acquire knowledge and skills related to livestock and the livestock production industry. Livestock Production may address topics related to beef cattle, dairy cattle, swine, sheep, goats, and poultry.

Professional Communications — TEA # 13009900 — Course # 0176P

Grade Placement: 10–12
Credits: 0.5

Professional Communications blends written, oral, and graphic communication in a career-based environment. Careers in the global economy require individuals to be creative and have a strong background in computer and technology applications, a strong and solid academic foundation, and a proficiency in professional oral and written communication. Within this context, students will be expected to develop and expand the ability to write, read, edit, speak, listen, apply software applications, manipulate computer graphics, and conduct Internet research.
Note: This ½ credit course within this specific career cluster is paired with the Professional Standards in Agribusiness ½ credit course. This combination of courses are only offered as a pair once every three years and have a competition requirement.

Professional Standards in Agribusiness — TEA # 13000800 — Course # 0517P

Grade Placement: 10-12
Credit: 0.5

Professional Standards in Agribusiness primarily focuses on leadership, communication, employer-employee relations, and problem solving as they relate to agribusiness.
Note: This ½ credit course within this specific career cluster is paired with the Professional Communications ½ credit course. This combination of courses are only offered as a pair once every three years and have a competition requirement.

Small Animal Management — TEA # 13000400 — Course # 0511

Grade Placement: 10-12
Credit: 0.5

In Small Animal Management, students will acquire knowledge and skills related to small animals and the small animal management industry. Small Animal Management may address topics related to small mammals such as dogs and cats, amphibians, reptiles, and birds.

Turf Grass Management — TEA # 13001950 — Course # 0518

Grade Placement: 10-12
Credit: 0.5

Turf Grass Management is designed to develop an understanding of turf grass management techniques and practices. To prepare for careers in horticultural systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to horticultural systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations.

Veterinary Medical Applications — TEA # 13000600 — Course # 2512

Grade Placement: 11-12
Credit: 1
Prerequisites: Equine Science and Small Animal Management; or Livestock Production

Veterinary Medical Applications covers topics relating to veterinary practices, including practices for large and small animal species.
Note: This course requires a Course Interest Form to be submitted.

Wildlife, Fisheries, and Ecology Management TEA # 13001500 Course # 0519

Grade Placement: 10-12
Credit: 1

Wildlife, Fisheries, and Ecology Management examines the management of game and non-game wildlife species, fish, and aqua crops and their ecological needs as related to current agricultural practices. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.