

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.*

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 has a competition requirement.*

Agricultural Equipment Design and Fabrication TEA # 13002350 Course # 0508

Grade Placement: 11-12

Credit: 1

Recommended Prerequisites: 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 Pending Board Approval Course # TBD

Grade Placement: 10-12

Credit: 1

Prerequisites: 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 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 metal working 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: 10–12

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.

Career Preparation I

TEA # 12701300

Course # 0531 & 2531

Grade Placement: 11-12

Credit: 2-3

Career Preparation I provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

Note: This course requires a Course Interest Form to be submitted and requires students to have either paid or unpaid employment. The employment site is typically selected by each individual student to ensure it correlates to their specific career interest area. Most employment sites are located out in our surrounding community.

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: 9–12

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.

Livestock Production

TEA # 13000300

Course # 0504

Grade Placement: 10-12

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 # 0176****Grade Placement: 9–12****Credits: .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 course meets the Sharyland ISD district-required speech credit.

Professional Standards in Agribusiness**TEA # 13000800****Course # TBD****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 course has 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**Pending Board Approval****Course # TBD****Grade Placement: 10-12****Credit: 0.5**

Turf Grass Management is designed to develop an understanding of turf grass management techniques and practices.

Note: This course has a competition requirement.

Wildlife, Fisheries, and Ecology Management**TEA # 13001500****Course # 0519****Grade Placement: 9-12****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.