



AGRICULTURE, FOOD, AND NATURAL RESOURCES

Programs of Study Information



About

The Agriculture, Food, and Natural Resources (AFNR) career cluster focuses on the essential elements of life, food, water, land, and air. This career cluster includes occupations ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist.

AGRIBUSINESS, LEADERSHIP, AND COMMUNICATIONS

Aligned Occupations

- Farmers, Ranchers, and other Agricultural Managers
- Loan Interviewers and Clerks
- Loan Officer

AGRICULTURAL TECHNOLOGY/MECHANICAL SYSTEMS

Aligned Occupations

- Farm Equipment Mechanics and Service Technicians
- Mobile Heavy Equipment Mechanic
- Farmers, Ranchers, and other Agricultural Managers

ANIMAL SCIENCE

Aligned Occupations

- Veterinarian
- Veterinary Technologist
- Veterinary Assistant/
Laboratory Animal Caretaker

PLANT SCIENCE

Aligned Occupations

- Veterinarian
- Veterinary Technologist
- Veterinary Assistant/
Laboratory Animal Caretaker



Programs of Study

AGRIBUSINESS, LEADERSHIP, AND COMMUNICATIONS

The Agriculture Business, Leadership, and Communications program of study focuses on occupational and educational opportunities associated with farming and agriculturally related businesses that supply farm inputs, such as machinery and seeds. This program of study includes exploration of farm product marketing, the purchase of farm products either for processing or resale, and the process of grading or classifying unprocessed food or other agricultural products.



AGRICULTURAL TECHNOLOGY AND MECHANICAL SYSTEMS

The Agricultural Technology and Mechanical Systems program of study focuses on occupational and educational opportunities associated with applying engineering technology and biological science to agricultural problems related to power and machinery, electrification, structures, soil and water use, and processing agricultural products. This program of study includes diagnosing, repairing, or overhauling farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems.



ANIMAL SCIENCE

The Animal Science program of study focuses on occupational and educational opportunities associated with the science, research, and business of animals and other living organisms. This program of study includes applying biology and life science to real-world life processes of animals and wildlife, either in laboratories or in the field, which could include a veterinary office, a farm or ranch, or any outdoor area harboring animal life. Students will research and analyze the growth and destruction of species and research or diagnose diseases and injuries of animals.



PLANT SCIENCE

The Plant Science program of study focuses on occupational and educational opportunities associated with the science, research, and business of plants and other living organisms. This program of study includes the application of biology and life science to real-world life processes of plants and vegetation, either in laboratories or in the field.





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Sequence	AGRIBUSINESS, LEADERSHIP, AND COMMUNICATIONS	AGRICULTURAL TECHNOLOGY AND MECHANICAL SYSTEMS	ANIMAL SCIENCE (Vet Focus)	ANIMAL SCIENCE	PLANT SCIENCE (Floriculture Focus)	PLANT SCIENCE (Horticulture Focus)
Y1	Survey of Agricultural, Food & Natural Resources	Agriculture Mechanics & Metal Technologies	Survey of Agricultural, Food & Natural Resources	Survey of Agriculture, Food, and Natural Resources	Survey of Agriculture, Food, and Natural Resources	Landscape Design & Management and Turf Grass Management
Y2	Professional Standards and Communication in Agribusiness	*Agricultural Structures Design and Fabrications	Small Animal Management and Equine Science or Livestock Production	Small Animal Management and Equine Science	Floral Design I	Horticulture Science
Y3	Entrepreneurship	*Agricultural Equipment, Design & Fabrication	*Veterinary Medical Applications (NEW name: Veterinary Science)	Livestock Production	*Floral Design II	Greenhouse Operation & Production
Y4	Agribusiness Management & Marketing	*Practicum in Agricultural Structures & Equipment	*Practicum in Veterinary Medical Applications(NE W name: Practicum in Veterinary Science)	*Animal Science	*Practicum in Floriculture and Horticulture	Plant & Soil Science



- AWS Certified Welder
- Elanco Veterinary Medical Applications
- Veterinary Assistant, Level I
- Texas State Florist's Association Level 1
- Texas State Florist's Association
Knowledge Based Floral Certification

