

Agriculture, Food, and Natural Resources Career Cluster



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.

Statewide Program of Study: 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.

Secondary Courses for High School Credit

Level 1 • Principles of Agriculture, Food, and Natural Resources

Level 2 • Small Animal Management
• Equine Science

Level 3 • Livestock Production

Level 4 • Advanced Animal Science
• Career Preparation for Programs of Study

Aligned Industry-Based Certifications

- Elanco Fundamentals of Animal Science Certification
- Production Agriculture - Job Ready

Aligned Advanced Academic Courses

Dual Credit	Dual credit offerings will vary by local education agency.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> • Shadow an animal scientist in a biology lab to learn about applying science to understand animals and wildlife • Intern in a veterinary clinic, caring for animals and wildlife being treated in the clinic
Expanded Learning Opportunities	<ul style="list-style-type: none"> • Participate in an FFA career, leadership, and speaking contest like an agriscience fair • Attend an agricultural industry seminar



Example Postsecondary Opportunities

Apprenticeships

- Reproduction Technician

Associate Degrees

- Biological and Physical Sciences
- Entomology

Bachelor's Degrees

- Animal Science
- Zoology/Animal Biology

Master's, Doctoral, and Professional Degrees

- Marine Sciences
- Biotechnology

Additional Stackable IBCs/License

- Veterinarian
- Certified Veterinary Technician



Example Aligned Occupations

Veterinary Assistants and Laboratory Animal Caretakers

Median Wage: \$29,906
Annual Openings: 1,348
10-Year Growth: 24%

Veterinary Technologists and Technicians

Median Wage: \$33,679
Annual Openings: 1,217
10-Year Growth: 24%

Veterinarian

Median Wage: \$103,160
Annual Openings: 347
10-Year Growth: 26%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024



For more information visit:
<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



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Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
Principles of Agriculture, Food, and Natural Resources* 13000200 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

Level 2

Course	Prerequisites Corequisites	Career Clusters
Small Animal Management 13000400 (0.5 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Equine Science 13000500 (0.5 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

Level 3

Course	Prerequisites Corequisites	Career Clusters
Livestock Production 13000300 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

Level 4

Course	Prerequisites Corequisites	Career Clusters
Advanced Animal Science 13000700 (1 credit)	Prerequisites: Biology and Chemistry or Integrated Physics and Chemistry (IPC); Algebra I and Geometry; and either Small Animal Management, Equine Science, or Livestock Production Corequisites: None Recommended Prerequisites: Veterinary Medical Applications Recommended Corequisites: None	
Career Preparation for Programs of Study* First Time Taken: 12701121 (2 credits)	Prerequisites: At least one Level 2 or higher CTE course Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

For additional information on the Agriculture, Food, and Natural Resources career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>