

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 a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

Animal Science Statewide Program of Study



The Animal Science program of study focuses on the science, research, and business of animals and other living organisms. It teaches CTE learners how to apply 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 may also 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 **and** Small Animal Management **and** Equine Science

Level 2

- Livestock Production with Lab

Level 3

- Choose 1 or 2 additional Agriculture electives (located on back page)

Level 4

- Advanced Animal Science **or**
- Practicum in Agriculture, Food, and Natural Resources

Postsecondary Opportunities

Associates Degrees

- Food Science and Technology
- Veterinary Studies
- Biotechnology Laboratory Technician
- Biology Technician

Bachelor's Degrees

- Animal Sciences
- Agriculture
- Biology
- Zoology/ Animal Biology

Master's, Doctoral, and Professional Degrees

- Genetics
- Veterinary Medicine
- Biological and Physical Sciences
- Biological and Biomedical Sciences

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Participate in Texas FFA

Work-Based Learning Activities

- Compete in an Agri-Science Fair 4H
- Volunteer at a local farm or with a veterinarian
- Participate in an FFA supervised agriculture experience

Industry-Based Certifications

- Elanco Fundamentals of Animal Science Certification
- Equine Management & Evaluation Certification



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Animal Breeders	\$39,139	28	9%
Animal Scientists	\$57,533	22	12%
Medical Scientists	\$63,898	435	27%
Veterinarians	\$93,496	294	24%
Zoologists and Wildlife Biologists	\$67,309	45	32%

Successful completion of the Animal Science program of study will fulfill requirements of a Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised – August 2022

Animal Science Course Information

Level 1

COURSE NAME	LOCAL ID SERVICE ID	PREREQUISITES	COREQUISITES
Principles of Agriculture, Food, and Natural Resources	CTAG10 13000200 (1 credit)	None	None
Small Animal Management	CTAG12 13000400 (0.5 credit)	None	None
Equine Science	CTAG13 13000500 (0.5 credit)	None	None

Level 2

COURSE NAME	LOCAL ID SERVICE ID	PREREQUISITES	COREQUISITES
Livestock Production with Lab	CAG20A/B 13000310 (2 credits)	None	None

Level 3

COURSE NAME	LOCAL ID SERVICE ID	PREREQUISITES	COREQUISITES
Floral Design/Lab*	CAG26A/B 13001800 (2 credits)	None	None
Agribusiness Management and Marketing*	CTAG43 13000900 (1 credit)	None	None
Wildlife, Fisheries, and Ecology Management*	CTAG23 13001500 (1 credit)	None	None

* Elective courses outside the Program of Study

Level 4

COURSE NAME	LOCAL ID SERVICE ID	PREREQUISITES	COREQUISITES
Advanced Animal Science	CTAG15 13000700 (1 credit)	Biology and Chemistry or Integrated Physics and Chemistry (IPC); Algebra I and Geometry; and either Small Animal Management, Equine Science, or Livestock Production	None
Practicum in Agriculture, Food, and Natural Resources	CAG82A/B 13002500 (2 credits)	None	None

FOR ADDITIONAL INFORMATION ON THE AGRICULTURE, FOOD, AND NATURAL RESOURCE CAREER CLUSTER,
PLEASE CONTACT: CTE@tea.texas.gov
<https://tea.texas.gov/cte>

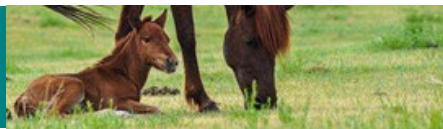
Spring Branch Independent School District does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: [Karen Heeth, Associate Superintendent for Talent/Administration, Wayne F. Schaper, Sr. Leadership Center, 955 Campbell Road, Houston, Texas 77024, 713-251-2346, Karen.Heeth@springbranchisd.com.]

Further nondiscrimination information can be found at [Notification of Nondiscrimination in Career and Technical Education Programs](#).

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Animal Science: Vet Med Statewide Program of Study



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Secondary Courses for High School Credit

Level 1

- Principles of Agriculture, Food, and Natural Resources **and** Small Animal Management **and** Equine Science

Level 2

- Livestock Production with Lab

Level 3

- Advanced Animal Science **and** Veterinary Medical Applications

Level 4

- Practicum in Agriculture, Food, and Natural Resources

Postsecondary Opportunities

Associates Degrees

- Food Science and Technology
- Veterinary Studies
- Biotechnology Laboratory Technician
- Biology Technician

Bachelor's Degrees

- Animal Sciences
- Agriculture
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Master's, Doctoral, and Professional Degrees

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- Elanco Veterinary Medical Applications Certification



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Animal Science: Vet Med

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Equine Science	CTAG13 13000500 (0.5 credit)	None	None

Level 2

COURSE NAME	LOCAL ID SERVICE ID	PREREQUISITES	COREQUISITES
Livestock Production with Lab	13000310 (2 credits)	None	None

Level 3

COURSE NAME	LOCAL ID SERVICE ID	PREREQUISITES	COREQUISITES
Advanced Animal Science	CTAG15 13000700 (1 credit)	Biology and Chemistry or Integrated Physics and Chemistry (IPC); Algebra I and Geometry; and either Small Animal Management, Equine Science, or Livestock Production	None
Veterinary Medical Applications	CTAG14 13000600 (1 credit)	Equine Science, Small Animal Management, or Livestock Production	None

Level 4

COURSE NAME	LOCAL ID SERVICE ID	PREREQUISITES	COREQUISITES
Practicum in Agriculture, Food, and Natural Resources	CAG82A/B 13002500 (2 credits)	None	None

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