

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.

Environmental and Natural Resources Statewide Program of Study



The Environmental and Natural Resources program of study explores the occupations and educational opportunities associated with the research, design, and planning of engineering or technical duties in the prevention and control of environmental hazards. This program of study may also include exploration into conducting research for the purpose of identifying, abating, or eliminating sources of pollutants or hazards that affect either the environment or the health of the population.

Secondary Courses for High School Credit

Level 1

- Principles of Agriculture, Food, and Natural Resources

Level 2

- Wildlife, Fisheries, and Ecology Management/Lab
- Forestry and Woodland Ecosystems/Lab

Level 3

- Range Ecology Management/Lab
- Energy and Natural Resources Technology/Lab

Level 4

- Advanced Energy and Natural Resource/Lab
- Practicum in Agriculture, Food, and Natural Resources
- Project-Based Research
- Scientific Research and Design

Postsecondary Opportunities

Associates Degrees

- Environmental Science
- Environmental Studies
- Wildlife, Fish, and Woodlands Science and Management
- Environmental Engineering Technology/ Environmental Technology

Bachelor's Degrees

- Environmental Science
- Environmental/ Environmental Health Engineering
- Wildlife, Fish, and Woodlands Science and Management
- Natural Resources Law Enforcement and Protective Services

Master's, Doctoral, and Professional Degree

- Environmental Science
- Environmental/ Environmental Health Engineering
- Wildlife, Fish, and Woodlands Science and Management
- Fishing and Fisheries Science and Management

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
<ul style="list-style-type: none"> • Attend summer leadership events • Participate in Texas FFA 	<ul style="list-style-type: none"> • Intern at a waste treatment plant • Participate in an FFA supervised agriculture experience

Industry-Based Certifications

- Ducks Unlimited Ecology Conservation & Management Certification
- Natural Resources Systems
- Water Operators, Class D
- Wastewater Collections*

*IBC sunseting 8/31/24



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Environmental Engineering Technicians	\$53,352	101	32%
Environmental Engineers	\$86,757	288	25%
Environmental Science and Protection Technicians, Including Health	\$40,268	508	17%
Environmental Scientists and Specialists, Including Health	\$77,896	644	24%
Zoologists and Wildlife Biologists	\$67,309	45	32%

Successful completion of the Environmental and Natural Resources program of study will fulfill requirements of the Business and Industry endorsement. Revised – August 2022

Environmental and Natural Resources Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	None

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Wildlife, Fisheries, and Ecology Management/Lab	13001500 (1 credit) 13001510 (2 credits)	None	None
Forestry and Woodland Ecosystems/Lab	13001700 (1 credit) 13001710 (2 credits)	None	None

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Range Ecology Management/Lab	13001600 (1 credit) 13001610 (2 credits)	None	None
Energy and Natural Resources Technology/Lab	13001100 (1 credit) 13001110 (2 credits)	None	None

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Advanced Energy and Natural Resources/Lab	13001200 (1 credit) 13001210 (2 credits)	None	None
Practicum in Agriculture, Food, and Natural Resources	13002500 (2 credits) 13002505 (3 credits) 13002510 (2 credits) 13002515 (3 credits)	None	None
Project-Based Research	12701500 (1 credit)	None	None
Scientific Research and Design	13037200 (1 credit)	Biology, Chemistry, Integrated Physics, and Chemistry (IPC), or Physics	None

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

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