



Principles of Agriculture, Food, and Natural Resources

Level 1

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

Level 2

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

Level 3

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

Level 4

HIGH SCHOOL/INDUSTRY CERTIFICATION	CERTIFICATE/LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/DOCTORAL PROFESSIONAL DEGREE
Wastewater Collections, Class 1	Board Certified Environmental Engineer - Hazardous Waste Management	Environmental Science	Environmental Science	Environmental Science
Water Operators, Class D	Certified Water Technologist	Environmental Studies	Environmental/Environmental Health Engineering	Environmental/Environmental Health Engineering
OSHA Hazardous Waste Operations and Emergency Response	Certified Environmental Scientist	Wildlife, Fish, and Woodlands Science and Management	Wildlife, Fish, and Woodlands Science and Management	Wildlife, Fish, and Woodlands Science and Management
	Certified in Public Health	Environmental Engineering Technology/Environmental Technology	Natural Resources Law Enforcement and Protective Services	Fishing and Fisheries Science and Management

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%

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

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.



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.

Successful completion of the Environmental and Natural Resources program of study will fulfill requirements of the Business and Industry Endorsement. Revised - July 2020



COURSE INFORMATION

COURSE NAME	SERVICE ID	PREREQUISITES (PREQ) COREQUISITES (CREQ)	Grade
Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	9-12
Wildlife, Fisheries, and Ecology Management/Lab	13001500 (1 credit) 13001510 (2 credits)	None	9-12
Forestry and Woodland Ecosystems/Lab	13001700 (1 credit) 13001710 (2 credits)	None	10-12
Range Ecology Management/Lab	13001600 (1 credit) 13001610 (2 credits)	None	10-12
Energy and Natural Resources Technology/Lab	13001100 (1 credit) 13001110 (2 credits)	None	10-12
Advanced Energy and Natural Resources/Lab	13001200 (1 credit) 13001210 (2 credits)	None	11-12
Practicum in Agriculture, Food, and Natural Resources	13002500 (2 credits) 13002505 (3 credits) 13002510 (2 credits) 13002515 (3 credits)	None	11-12
Project-Based Research	12701500 (1 credit)	None	11-12
Scientific Research and Design	13037200 (1 credit)	PREQ: Biology, Chemistry, Integrated Physics, and Chemistry (IPC), or Physics	11-12

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