

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.

Food Science and Technology Statewide Program of Study



The Food Science and Technology program of study explores the occupations and educational opportunities associated with working with agricultural and food scientists in food, fiber, and animal research, production, and processing. This program of study may also include assisting with animal breeding, nutrition, and conducting tests and experiments to improve yield and quality of crops or to increase the resistance of plants and animals to disease or insects.

Secondary Courses for High School Credit

Level 1

- Principles of Agriculture, Food, and Natural Resources

Level 2

- Food Technology and Safety/Lab

Level 3

- Food Processing/Lab

Level 4

- Practicum in Agriculture, Food, and Natural Resources
- Project Based Research
- Scientific Research and Design

Postsecondary Opportunities

Associates Degrees

- Food Science

Bachelor's Degrees

- Agricultural and Food Products Processing
- Food Science and Nutrition
- Food Science and Technology

Master's, Doctoral, and Professional Degrees

- Food Science and Technology

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

- Tour a food products processing facility
- Participate in Texas FFA

Work-Based Learning Activities

- Intern at a food products processing facility
- Participate in an FFA supervised agriculture experience

Industry-Based Certifications

- Culinary Meat Selection & Cookery Certification
- Food Safety & Science Certification
- Pre-Professional Certification in Food Science Fundamentals



Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Agricultural and Food Science Technicians	\$34,382	236	11%
Supervisors of Production and Operating	\$62,171	5,094	9%
Inspectors, Testers, Sorters, Samplers, and Weighers	\$37,689	6.653	%%

Successful completion of the Food Science and Technology 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

Food Science and Technology

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
Food Technology and Safety/Lab	13001300 (1 credit) 13001310 (2 credits)	None	None

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Food Processing/Lab	13001400 (1 credit) 13001410 (2 credits)	None	None

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
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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