

Business & Industry Endorsement

CAREER CLUSTER

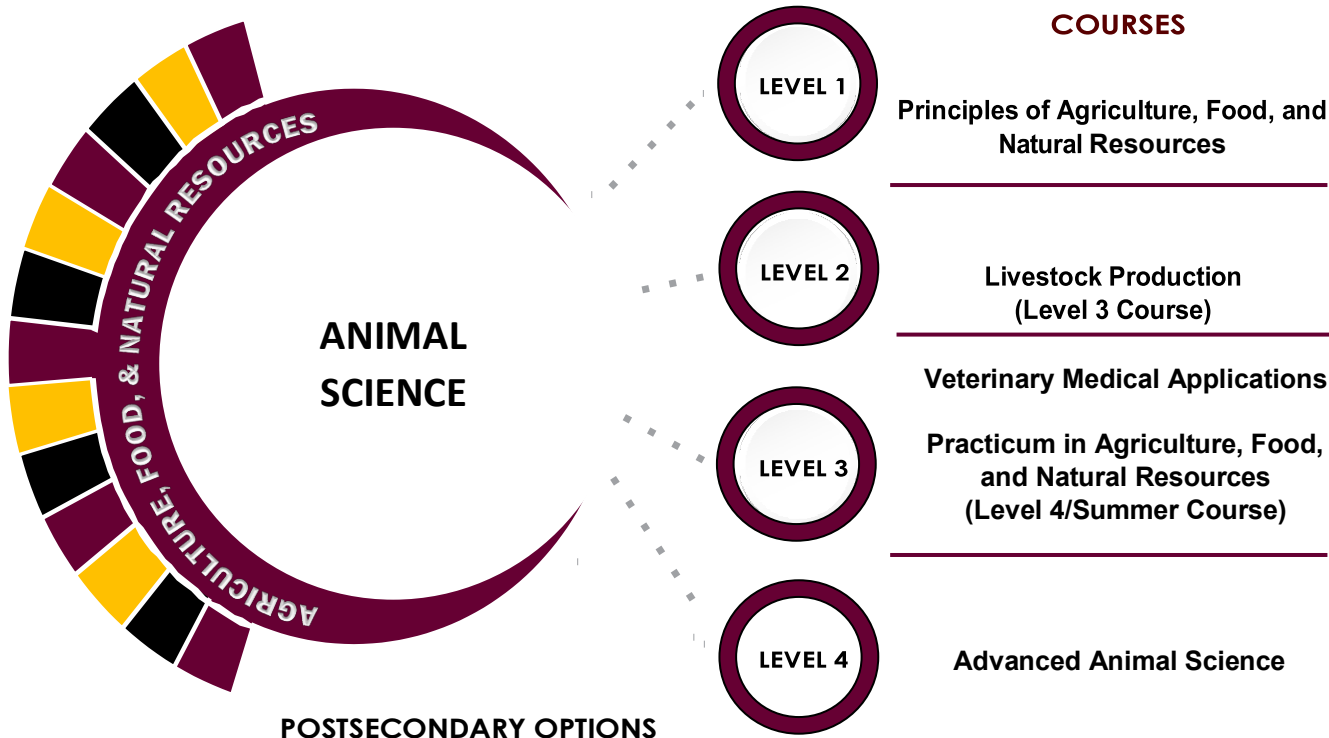
PROGRAMS OF STUDY



Students completing two or more courses for two or more credits within a program of study earn concentrator status for Perkins V federal accountability reporting.

Students finishing three or more courses for four or more credits with one course from level 3 or 4 within a program of study earn completer status for Perkins V federal accountability reporting.





HIGH SCHOOL/ *INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Licensed Veterinary Technician	Pet Groomer	Food Science and Technology	Animal Sciences	Genetics	Animal Breeders	\$39,13	28	9%
*Certified Veterinary Assistant, Level 1	Veterinary Technician	Veterinary Studies	Agriculture	Veterinary Medicine	Animal Scientists	\$57,533	22	12%
*Texas Beef Quality Assurance	Licensed Breeder	Biotechnology Laboratory Technician	Biology	Biological and Physical Sciences	Medical Scientists	\$63,898	435	27%
*OSHA 30 Hour General Industry	Feedyard Technician in Cattle and Care Handling	Biology Technician	Zoology/Animal Biology	Biological and Biomedical Sciences	Veterinarians	\$93,496	294	24%
*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.					Zoologists and Wildlife Biologists	\$67,309	45	32%
For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.					WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES			
					Exploration Activities:	Work Based Learning Activities:		
					Texas FFA	Agri-Science Fairs		
					Junior FFA	4H		
					SkillsUSA	Clinical Rotation at		
					Rio Grande Valley Livestock Show	Veterinary office		
						Volunteer at a local farm		

The Animal Science program of study focuses on the science, research, and business of animals and other living organisms. It teaches students 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.



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.

Successful completion of the Animal Science program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.



COURSE INFORMATION

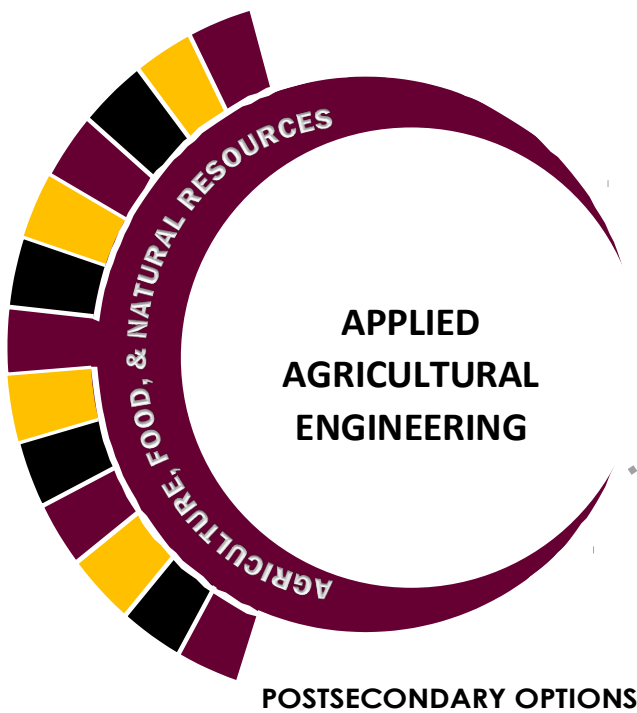
COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	9-12
Livestock Production	13000300 (1 credit)	None	10-12
Veterinary Medical Applications	13000600 (1 credit)	PREQ: Equine Science, Small Animal Management, or Livestock Production	11-12
Practicum in Agriculture, Food, and Natural Resources	13002500 (2 credits)	None	11-12
Advanced Animal Science	13000700 (1 credit)	PREQ: Biology and Chemistry or Integrated Physics and Chemistry (IPC); Algebra I and Geometry; and either Small Animal Management, Equine Science, or Livestock Production	11-12

FOR ADDITIONAL INFORMATION ON THE AGRICULTURE, FOOD, AND NATURAL RESOURCES CAREER CLUSTER, PLEASE CONTACT:

Amanda Brantley/Amana.Brantley@tea.texas.gov

<https://tea.texas.gov/cte>

<http://www.donnaisd.net/Community/Graduation-Plans>



COURSES

LEVEL 1

Principles of Agriculture, Food, and Natural Resources

LEVEL 2

Agricultural Mechanics and Metal Technologies

LEVEL 3

Agricultural Structures Design and Fabrications

LEVEL 4

POSTSECONDARY OPTIONS

HIGH SCHOOL/ *INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
*OSHA 30 Hour General Industry	Certified Professional Agronomist	Heavy Equipment Technology/ Technician	Agricultural Engineering		Outdoor Power Equipment & Other Small Engine Mechanics	\$32,406	366	16%
*AWS D1.1 and/or D9.1 Certification	Fluid Power Mobile Hydraulic Mechanic	Welding Technology/ Welding			Welders	\$41,350	6,171	9%
*NIMS Materials, Measurement and Safety	Certified Reliability Engineer	Agricultural Mechanization, General			Agricultural Engineers	\$64,792	9	13%
AWS SENSE Welding, Level 1	Certified Irrigation Designer	Small Engine Mechanics & Repair Technology			Mobile Heavy Equipment Mechanics	\$47,299	1,627	16%
*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.					<p>WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES</p> <p>Exploration Activities: Texas FFA Junior FFA Skills USA</p> <p>Work Based Learning Activities: Earn a welding Certificate Volunteer/Intern at a local farm</p>			
For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.								

The Applied Agricultural Engineering program of study explores the occupations associated with applying knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing agricultural products. This program of study may also include exploration into diagnosing, repairing, or overhauling farm machinery and vehicles, such as tractors, harvesters, dairy equipment and irrigation systems.



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.

Successful completion of the Applied Agriculture Engineering program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.



COURSE INFORMATION

COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	9-12
Agricultural Mechanics and Metal Technologies	13002200 (1 credit)	None	10-12
Agricultural Structures Design and Fabrications	13002300 (1 credit)	PREQ: Agricultural Mechanics and Metal Technologies	11-12

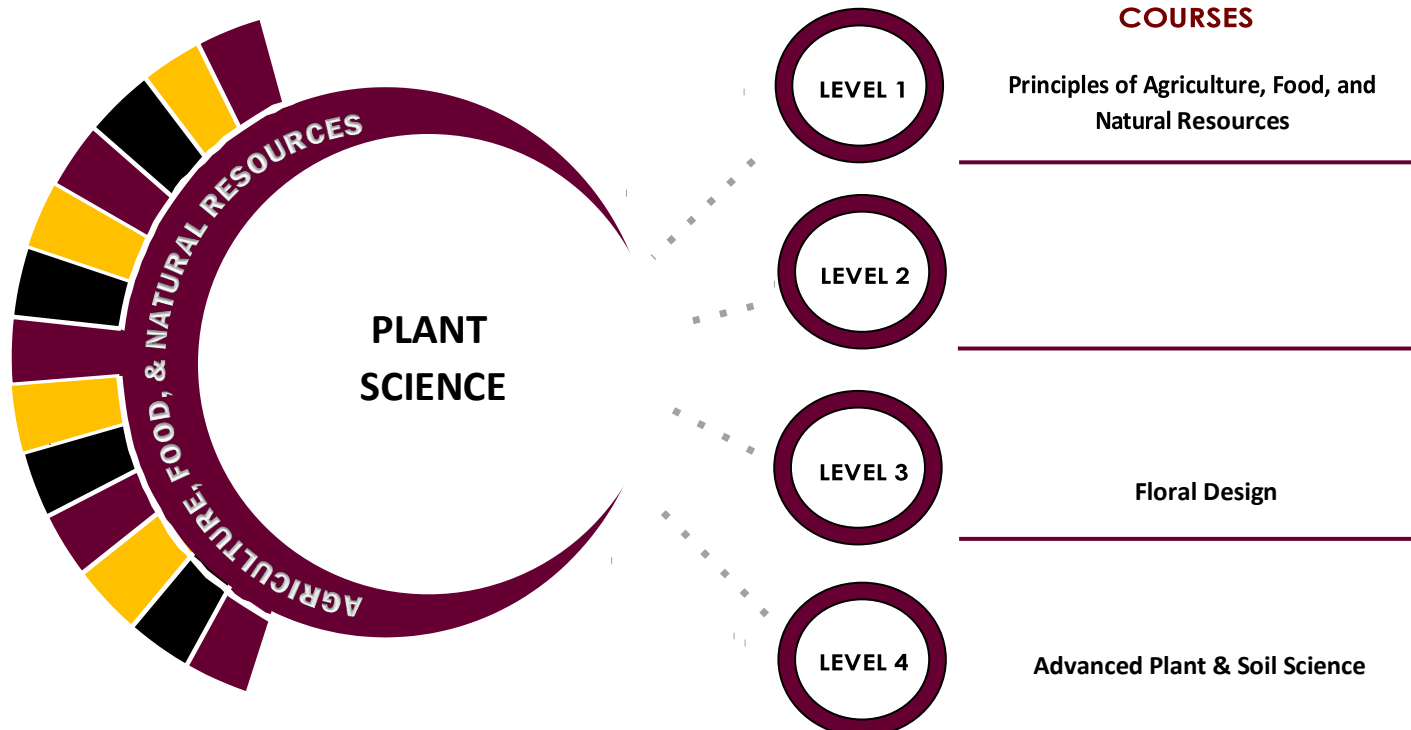
FOR ADDITIONAL INFORMATION ON THE AGRICULTURE, FOOD, AND NATURAL RESOURCES CAREER CLUSTER, PLEASE CONTACT:

Amanda Brantley/Amana.Brantley@tea.texas.gov

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COURSES



POSTSECONDARY OPTIONS

HIGH SCHOOL/ *INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE	OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
*OSHA 30 Hour General Industry	Landscape Industry Certified Technician	Turf and Turfgrass Management	Farm/Farm and Ranch Management		Soil and Plant Scientists	\$54,662	116	21%
*Commercial/ Noncommercial Pesticide Applicator	Pesticide Applicator	Ornamental Horticulture	Agronomy and Crop Science		Tree Trimmers And Pruners	\$32,240	589	14%
*Texas State Floral Association, Level One	Certified Floral Designer	Member of AIFD	Agricultural Business and Management, General		Pesticide Handlers, Sprayers, and Applicators	\$36,733	196	22%
*Landscape Irrigation Technician License	Certified Irrigation Designer	Applied Horticulture/ Landscape Designer	Horticulture Operations, General		Landscaping Supervisors	\$44,408	807	19%
					Biological Technicians	\$42,931	452	17%
*Certification offered at DISD. Additional industry based certification information is available from the TEA CTE website.					WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES Exploration Activities: Texas FFA Junior FFA SkillsUSA Work Based Learning Activities: Earn a Floral Design Certificate Work at a Floral Shop Intern/Work at a Landscaping Business			
For more information on postsecondary options for this program of study, visit TXCTE.org, your counselor, or the CTE department at DISD.								

The Plant Science program of study focuses on the science, research, and business of plants and other living organisms. It teaches students how to apply biology and life science to real-world life processes of plants and vegetation, either in laboratories or in the field.



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.

Successful completion of the Plant Science program of study will fulfill requirements of the Business and Industry Endorsement – Approved Statewide Programs of Study – September 2019.



COURSE INFORMATION

COURSE NAME	SERVICE ID	PREREQUISITES (PREQ)	GRADE
Principles of Agriculture, Food, and Natural Resources	13000200 (1 credit)	None	9-12
Floral Design	13001800 (1 credit)	None	9-12
Advanced Plant and Soil Science	13002100 (1 credit)	None	11-12

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