# Agriculture, Food, and Natural Resources Career ClusterStatewide Program of Study: Plant Science; Agriculture, Food, and Natural Resources Career Cluster

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| --- | --- |
| **Level 1** | Principles of Agriculture, Food, and Natural Resources |
| **Level 2** | Greenhouse Operation and Production/Lab |
| **Level 3** | Floral Design/LabHorticultural Science/Lab |
| **Level 4** | Advanced Floral Design |

| **HIGH SCHOOL/ INDUSTRY CERTIFICATION** | **CERTIFICATE/ LICENSE\*** | **ASSOCIATE’S DEGREE** | **BACHELOR’S DEGREE** | **MASTER’S/ DOCTORAL PROFESSIONAL DEGREE** |
| --- | --- | --- | --- | --- |
| Landscape Irrigation Technician License  | Pesticide Applicator | Applied Horticulture/Horticulture Operations, General | Applied Horticulture/Horticulture Operations, General | Applied Horticulture/Horticulture Operations, General |
| Commercial/ Noncommercial Pesticide Applicator  | Certified Floral Designer | Ornamental Horticulture | Agronomy and Crop Science | Agronomy and Crop Science |
| Texas State Floral Association Level One Floral Certification  | Accredited Member of AIFD | Agricultural Business and Management, General | Agricultural Business and Management, General | Agricultural Business and Management, General |
| Texas State Floral Association Level Two Floral Certification | Landscape Industry Certified Technician | Turf and Turfgrass Management | Turf and Turfgrass Management | Farm/Farm and Ranch Management |

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.

| **Occupations** | **Median Wage** | **Annual Openings** | **% Growth** |
| --- | --- | --- | --- |
| Soil and Plant Scientists  | $54,662 | 116 | 21% |
| Tree Trimmers and Pruners  | $32,240 | 589 | 14% |
| Pesticide Handlers, Sprayers, and Applicators  | $36,733 | 196 | 22% |
| Landscaping Supervisors  | $44,408 | 807 | 19% |
| Biological Technicians  | $42,931 | 452 | 17% |

**WORK BASED LEARNING AND EXPANDED**

**LEARNING OPPORTUNITIES**

| **Exploration Activities:** | **Work Based Learning****Activities:** |
| --- | --- |
| Texas FFA  | Work part-time at a florist;start or work for a local landscaping businessFFA Supervised Agriculture Experience (SAE) |

**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.**

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**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 Plant 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 - 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 |
| Floral Design/Lab | 13001800 (1 credit)13001810 (2 credits) | None | 9-12 |
| Horticultural Science/Lab | 13002000 (1 credit)13002010 (2 credits) | None | 10-12 |
| Advanced Floral Design | N1300270 (1 credit) | PREQ: Floral Design | 11-12 |
| Greenhouse Operation and Production/Lab | 13002050 (1 credit)13002060 (2 credits) | None | 10-12 |

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

(District) offers career and technical education programs in (types of programs offered). Admission to these programs is based on (admission standards). It is the policy of (District) not to discriminate on the basis of race, color, national origin, sex or handicap in its vocational programs, services or activities as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; and Section 504 of the Rehabilitation Act of 1973, as amended. It is the policy of (District) not to discriminate on the basis of race, color, national origin, sex, handicap, or age in its employment practices as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; the Age Discrimination Act of 1975, as amended; and Section 504 of the Rehabilitation Act of 1973, as amended. (District) will take steps to assure that lack of English language skills will not be a barrier to admission and participation in all educational and vocational programs. For information about your rights or grievance procedures, contact the Title IX Coordinator at (physical address of Coordinator) (email address of Title IX Coordinator), (phone number of Title IX Coordinator), and the Section 504 Coordinator at (physical address of Coordinator), (email address of Section 504 Coordinator), (phone number of Section 504 Coordinator)