

Agricultural Science Academy

Plant Science

045-BI-Plant Science @ SCTHS



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.

Secondary Courses for High School Credit

Level 1

- **09704** Principles of Agriculture, Food, and Natural Resources
- **29709** Greenhouse Operation and Production

Level 2

- **09707** Floral Design
- **19705** Horticultural Science with Lab

Level 3

- **19709** Practicum in AFNR – Plant Science

Level 4

- **39709** Practicum in Agriculture, Food, and Natural Resources – Plant Science Ext

Postsecondary Opportunities

Associates Degrees

- Applied Horticulture/ Horticulture Operations, General
- Ornamental Horticulture
- Agricultural Business and Management, General
- Turf and Turfgrass Management

Bachelor's Degrees

- Applied Horticulture/ Horticulture Operations, General
- Agronomy and Crop Science
- Agricultural Business and Management, General
- Turf and Turfgrass Management

Master's, Doctoral, and Professional Degrees

- Applied Horticulture/ Horticulture Operations, General
- Agronomy and Crop Science
- Agricultural Business and Management, General
- Farm/Farm and Ranch Management

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

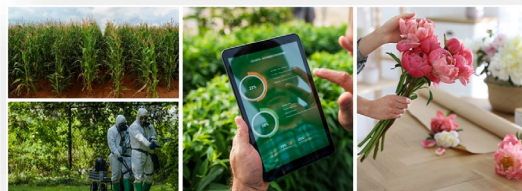
- Participate in Texas FFA

Work-Based Learning Activities

- Work at a florist or landscaper business
- Participate in an FFA supervised agriculture experience

Industry-Based Certifications

- BASF Plant Science Certification
- Principles of Floral Design Certification
- Texas State Florist's Association Knowledge Based Floral Certification



Aligned Occupations

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%

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 – October 2022

COURSE INFORMATION

09704	PRINCIPLES OF AGRICULTURE, FOOD AND NATURAL RESOURCES	GPA Level: Regular
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Grade Level: 9	Service ID: 13000200 (1 cr.)	Prerequisites: None
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This is an introductory course designed to provide an overview of global agriculture. The course includes leadership, career development, communications, livestock, plant and soil science and food science.

29709	GREENHOUSE OPERATION AND PRODUCTION	GPA Level: Regular
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Grade Level: 9-12	Service ID: 13002050 (1 cr.)	Prerequisites: None
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Greenhouse Operation and Production is designed to develop an understanding of greenhouse production techniques and practices. To prepare for careers in horticultural systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to horticultural systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations.

09707	FLORAL DESIGN	GPA Level: Regular Fine Art Credit
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Grade Level: 9-12	Service ID: 13001800 (1 cr.)	Prerequisites: None
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Floral Design is designed to develop students' ability to identify and demonstrate the principles and techniques related to floral design as well as develop an understanding of the management of floral enterprises. Through the analysis of artistic floral styles and historical periods, students will develop respect for the traditions and contributions of diverse cultures. Students will respond to and analyze floral designs, thus contributing to the development of lifelong skills of making informed judgments and evaluations.

19705	HORTICULTURAL SCIENCE with LAB	GPA Level: Regular
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Grade Levels: 10-12	Service ID: 13002010 (2 cr.)	Prerequisites: None
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Horticultural Science is designed to develop an understanding of common horticultural management practices as they relate to food and ornamental plant production.

19709	PRACTICUM IN AGRICULTURE, FOOD AND NATURAL RESOURCES – PLANT SCIENCE	GPA Level: Regular
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Grade Levels: 11-12	Service ID: 13002500 (2 cr.)	Prerequisites: None
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The practicum course is designed to give students an opportunity to enhance their previous learning by participating in a paid/unpaid internship or lab setting in their chosen Agriculture, Food and Natural Resource field.

39709	PRACTICUM IN AFNR – PLANT SCIENCE EXTENDED	GPA Level: Regular
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Grade Levels: 11-12	Service ID: 13002515 (3 cr.)	Prerequisites: None
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The practicum course is designed to give students an opportunity to enhance their previous learning by participating in a paid/unpaid internship or lab setting in their chosen Agriculture, Food and Natural Resource field.