



Agriculture, Food and Natural Resources: Plant Systems Snohomish High School Only

A career in plant agriculture offers a multitude of benefits, ranging from contributing to sustainable food production to promoting environmental conservation. In Washington state, where the agricultural sector is prominent, this career path boasts a strong job market. According to recent employment data, the state's agricultural industry provides substantial employment opportunities, with a diverse range of roles including crop managers, horticulturists, agricultural technicians, and researchers. The demand for skilled professionals in plant agriculture is expected to remain steady, driven by the growing focus on organic farming, urban agriculture, and research into climate-resilient crops. This presents individuals with a chance to make a meaningful impact on both the local economy and the global challenge of feeding a growing population while safeguarding the environment. Students who complete 2.0 credits in this pathway will satisfy CTE pathway graduation requirements.



Students in this pathway will:

- ➔ Be able to meet two years of science credit requirements by taking Plant Biology and Advanced Plant Biology.
- ➔ Be able to participate in Future Farmers of America to practice their skills in working with and caring for plants.
- ➔ Be able to receive college credits through Edmonds Community College upon successful completion of Plant Biology.
- ➔ Be prepared to work in careers directly out of high school, or to receive additional training at two- and four-year colleges.

What high-demand careers are related to an Plant Systems Pathway?

High-demand careers	Annual salary in Washington	Required training after high school	Schools offering degrees or certification
Grounds maintenance worker	\$45,000	High school diploma	Snohomish High School
Soil and plant scientist	\$75,000	Bachelor's degree	Skagit Valley Community College
Environmental scientist	\$106,000	Bachelor's degree	University of Washington Washington State University
Natural sciences manager	\$164,000	Bachelor's degree	University of Washington Washington State University Western Washington University

* Information from Washington State Employment Security Department, 2023

What courses are offered in the Plant Systems Pathway?

High school courses in this pathway	College credit offered			Leads to a certification?	Equivalencies offered to meet graduation requirements
	CTE dual credit	College in the High School	AP		
Plant Biology (1.0 credit)	X				1.0 biology credit
Advanced Plant Biology (1.0 credit)					1.0 science credit
Floral Design (0.5 credit)					0.5 art credit

Plant Systems Pathway course sequence:



Course descriptions:

Plant Biology – This science course is designed around the scientific principles and concepts that drive living systems. Students will follow the steps of the scientific method in classroom activities and laboratory investigations. The main concepts covered will be ecology, biochemistry, cells, genetics, evolution, anatomy, and importance of domestic plants. Up to seven college credits is available through CTE dual credit. There is 1.0 biology equivalency credit available.

Advanced Plant Biology – This elective laboratory science class focuses on advanced plant systems. Topics include greenhouse management, plant propagation, health, disease identification, marketing, and planning for the community plant sale. Nursery, landscape, and floriculture practices will be explored by hands on application of design principles.

Floral Design – Floral Design will allow students to explore the world of art through flowers. During labs, students will make corsage and boutonnieres, rose bouquets, bow making, bud vase arrangements, and holiday-specific arrangements. Students will make floral arrangements, following the basic principles of design. They will learn to identify 120 flowers and plants and learn techniques and trends that are used by florists.

What club is offered to practice career-related skills and leadership?

Future Farmers of America is the CTE co-curricular opportunity (called a Career and Technical Student Organization) that is related to the Plant Systems career pathway. The Future Farmers of America (FFA) is a dynamic youth organization that fosters leadership and personal growth through agricultural education. In FFA, students partake in a wide range of experiential learning activities, including hands-on projects, leadership development events, and competitive experiences that promote agricultural awareness and proficiency. Members have the opportunity to raise animals, cultivate crops, engage in community service, and participate in career development events that span various agricultural disciplines. As FFA students advance through their educational journey, they acquire skills in communication, problem-solving, and strategic thinking, all of which equip them for success in both agricultural and non-agricultural careers. Beyond high school, FFA alumni often pursue careers in agriculture, agribusiness, animal science, environmental management, and related fields, contributing to sustainable food production and the well-being of rural communities and beyond.

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