Aerospace Manufacturing

Snohomish High School Only

The Aerospace Manufacturing Pathway, also known as Core Plus Manufacturing Production Pathway, allows students to meet their graduation pathway requirements with 1.5 credits. Students in this pathway can look forward to strong career prospects over the next five years. According to Workforce Training and Education Coordinating Board and State Board for Community and Technical Colleges, opportunities for graduates with aerospace manufacturing skills will continue to grow.

Students in this pathway will:

- Will have the opportunity to graduate with 17 college credits.
- Will have the opportunity to work at Boeing without an interview after graduation if all Core Plus manufacturing skills have been acquired.
- Will qualify to be a part of the Boeing summer internship.
- Can meet part of their science graduation requirement.

What high-demand careers are related to an Aerospace Manufacturing Pathway?

High-demand careers	Annual salary in Washington	Required training after high school	Schools offering degrees or certification
Computer numerically controlled tool operators	$50,056	High school diploma	Lake Washington Institute of Technology Everett Community College Renton Technical College
Machinist	$53,275	High school diploma	Lake Washington Institute of Technology Everett Community College Renton Technical College
Structural metal fabricators and fitters	$50,000	High school diploma	Renton Technical College Everett Community College Bates Technical College
Welders, cutters, solderers, and brazers	$62,021	High school diploma	Lake Washington Institute of Technology Everett Community College Renton Technical College

** Information from Washington State Employment Security Department, 2023*

What courses are offered in the Aerospace Manufacturing Pathway?

Middle school courses in this pathway	College credit offered			Leads to a certification?	Equivalencies offered to meet graduation requirements
Exploring Engineering I	N/A			N/A	N/A
Exploring Engineering II	N/A			N/A	N/A
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**		
Shop 1: Shop Tech (0.5 credits)					
Shop 2: Core Plus Manufacturing (1.0 credit)	X			Core Plus Aerospace Certification	0.5 science credit

Aerospace Manufacturing Pathway course sequence:

Middle school course descriptions:

Exploring Engineering I – This is a semester-long exploratory STEM course that incorporates project-based learning, with a focus on the engineering cycle. Students will learn about a variety of topics, including power tool safety and operation, measurement, robotics, CNC manufacturing, CADD, robotics, and more.

Exploring Engineering II – This is a semester-long exploratory STEM course that incorporates project-based learning, with a focus on the engineering cycle. Students will apply problem solving, visual communication, and industrial skills to design and build challenging and exciting projects. Units of study include power tool safety and operation, manufacturing, electricity/electronics, CADD, and more. Engineering I is not a prerequisite for this course.

High school course descriptions:

Shop 1: Shop Tech - This is an exploratory course focused on engineering and technology. Students will look at various technology systems, manufacturing processes and associated careers. Using demonstrations, hands-on activities, and small projects, students learn how to apply STEM skills to real-world engineering problems.

Shop 2: Core Plus Manufacturing - In this class, students plan, fabricate, stage, and assemble aerospace components from engineering blueprints and specifications. Students will be prepared for engineering programs, immediate manufacturing employment, advanced certifications, and further employment. In addition, special employment agreements between Boeing and Core Plus certified students exist, like participating in the summer Boeing internship and direct employment from the class. Students may receive a Core Plus Manufacturing certificate. 17 college credits are available to students through CTE dual credit. 0.5 science equivalency credit is available.

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

In high school, SkillsUSA is the CTE co-curricular opportunity (called a Career and Technical Student Organization) that is related to the Aerospace Manufacturing Pathway. SkillsUSA is a prominent student organization that empowers young individuals with technical and leadership skills, preparing them for successful careers in trade, technical, and skilled service occupations. Through SkillsUSA, students engage in a variety of hands-on activities, competitions, and workshops that enhance their expertise in fields such as construction, manufacturing, automotive technology, healthcare, and more. Members have the opportunity to develop practical skills, collaborate with peers, and demonstrate their abilities in regional, state, and national competitions. As they progress through their education, SkillsUSA students hone their problem-solving, teamwork, and communication skills, positioning them for a broad spectrum of careers. Following high school, many SkillsUSA alumni embark on pathways in fields such as welding, engineering, healthcare technology, culinary arts, and other skilled trades, contributing to industries that are vital to economic growth and innovation.

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