AEROSPACE MACHINING & FABRICATION

Program of Study

One or Two Year Program

Career Cluster: Manufacturing

Career Pathway: Production Manufacturing

This Career Pathway Program of Study can serve as a guide along with other career planning materials as learners continue on a career path. Courses listed within this program are only recommended coursework and should be individualized to meet each learner's education and career goals. The courses outlined below are only RECOMMENDATIONS. Course offerings may vary from high school to high school. Additionally, a PPR (Personalized Pathway Requirement) may be used in lieu of some of the World Language and/or Art credit requirement. See your high school counselor for additional graduation requirement information.

PPR – Personal Pathway Requirement *World Language – 2.0 credit may be met through a PPR * *Art – 1.0 credit may be met through a PPR

EDUCATION LEVELS	GRADE	English/ Language Arts	Math	Science	Social Studies	Other Requirements	Electives	Summer School Offerings High School Credit Free of Charge
MS	**6-8**	Grade Level ELA	Grade Level Math	Grade Level Science	Grade Level Social Studies		STEM Classes	**Summer School Available After the 8th Grade Year**
High School	**9**	ELA 9	Integrated Math I OR Intensive Integrated Math I	Physical Science		Health (.5) PE (.5) World Language* Art**	**CTE & Elective Options to be Taken Grades 9-11** • STEM I • STEM II • STEM III • CHS-UW/CSE 142 Computer Programming • AP Computer Sci Principles • CHS-UW/ESRM 101 Forestry • CHS-UW/ESRM 150 Wildlife • Anytime Fitness • Physics • Leadership	**PCSC Summer School** Aerospace Machining & Fabrication, Aerospace Composites, Automotive Technology, Construction Trades, PC Networking & Hardware Repair at PCSC See PCSC Summer School application for additional course offerings at other PCSC summer school locations. Offerings also include CTE classes that may satisfy academic credit graduation requirements – specifically in art, PE, and health.
	10	ELA 10	Integrated Math II	Biology OR BIOL 101 (CHS/CWU)	World Studies OR HIST 103 (CHS/EWU)	PE World Language* Art**		
	11	ELA 11 OR ENGL 101 (CHS/EWU)	Integrated Math III OR 1.0 3rd year Math credit Aerospace Composites at PCSC	STEM 1 and 2 OR STEM 3 OR Chemistry	US Studies OR AP US		**Junior Year Options at PCSC:** Aerospace Machining & Fabrication at PCSC (DC) OR Aerospace Composites at PCSC	
	12	ELA 12 OR ENGL 170 (CHS/EWU)	1.0 Tech Math credit Aerospace composites at PCSC	*Recommend 4TH YR Science* STEM 1 and 2 OR STEM 3 OR Chemistry	Civics & Economics OR POLS 210 (CHS/CWU)		**3.5 Occupational Ed Credits Aerospace Machining & Fabrication at PCSC (DC)**	
Credit Equivalency, Certifications & Dual Credit	**High School Credit Equivalency:** 1.0 Technical Math/3rd year Math 3.5 CTE/Elective			**Certifications Earned at PCSC:** Industry-Developed Aerospace Certificate First Aid/CPR			**Articulation/Dual Credit: (DC)** Clover Park Technical College – 13 credits Bates Technical College – 5 credits CHS (College in the High School) UW – 15 credits CHS (College in the High School) CWU – 5 credits CHS (College in the High School) EWU – 15 credits *Articulation agreements and number of credits are subject to change*	

Clubs and Extracurricular Activities	**TSA** **Technical Student Association**	**OMS TSA Advisor:** Oliver Chadwick chadwicko@orting.wednet.edu	**OHS TSA Advisor:** Denise Thompson thompsond@orting.wednet.edu

Additional Program Information

Course Description

The Aerospace Composites program is designed to prepare students to fabricate, assemble and repair composite materials. Students design, build and repair composite parts and assemblies using the same techniques as our industry partners. Students also earn a locally-developed manufacturing certificate.

Course Outline

- Safety
- Boeing Core+ Curriculum
- Precision Measurement
- Part Layout and Assembly
- Mechanical Joinery, Drilling Precision Holes and Affixing Industry-Based Fixtures
- Hand Laid Composite Fabric Manufacturing
- Resin Infusion Manufacturing
- Thermoset Pre-Impregnated Epoxy Fabric Manufacturing
- Root Cause Analysis
- Corrective Action
- 6 S's
- Pneumatic Hand Tool Use and Safety

Local Public Post-Secondary Options

- Bates Technical College
- Clover Park Technical College
- Everett Community College
- Western Washington University
- Central Washington University
- Washington State University
- University of Washington

Careers & Job Outlook

The information provided below is from the Washington State Employment Security Department.

https://esd.wa.gov/labormarketinfo/learn-about-an-occupation#/details

Occupation	Annual Salary
Aerospace Engineering and Operations Technicians	$94,781
Aerospace Engineers	$122,009
Aircraft Mechanics and Service Technicians	$69,604
Assemblers and Fabricators (Composites & Metal)	$37,479
CNC Machine Tool Programmers	$106,622
Industrial Engineering Technician	$87,361
Machinist	$52,597
Machinists and Tool and Die Makers	$40,910
Occupational Health and Safety Specialists	$80,823
Sheet Metal Workers	$67,225

Additional career and outlook information can be found on the following websites

www.bls.gov
www.careerbridge.wa.gov
www.careercruising.com