

AEROSPACE AND ADVANCED MANUFACTURING

SEPTEMBER 2024



“The Washington state aerospace industry employed 77,400 workers (annual average) in 2023, and paid \$11.3 billion in worker wages, generating \$57.2 billion in gross business revenues in 2023.”

Seattle Metro Chamber Aerospace Impacts Report, July 2024

Making aerospace soar



Described as the “most competitive business environment for the manufacture of major aerospace structures and for the final assembly of aircraft,”¹ aerospace is a Washington state economic powerhouse generating jobs that fuels our economy. Washington’s community and technical colleges produce the world-class employees needed to keep it that way.

All 34 of Washington’s community and technical colleges offer the aerospace, aerospace-related and advanced manufacturing training demanded by the state’s industry. This training moves well-trained workers into well-paying jobs. The number of programs offered, in fact, has grown over the last few years in order to meet industry demand for specialized employees, especially as the current workforce ages and retires each year.

Training the aerospace pipeline

The aerospace industry is more than just building airplanes. Its scope encompasses areas like avionics — which refers to aviation and electronics — mechatronics, electronics and composites. The aerospace industry now includes uncrewed systems, sustainable fuels, and space. In this rapidly changing world, firms need their employees to be up-to-date on the latest trends and technology so they can stay competitive.

Career-connected learning

The Aerospace Joint Apprenticeship Committee (AJAC) Advanced Manufacturing Apprenticeship designs, develops and implements career-connected learning apprenticeship programs for aerospace and manufacturing occupations. AJAC — comprised of industry employers and employees — delivers training specific to area occupational needs, hiring instructors from industry to ensure training reflects current practices.

Apprentices take related supplemental instruction one night a week at a community or technical college and complete on-the-job training during the day at a company’s job site. Seven community and technical colleges² participate in AJAC apprenticeship programs.

CONTACT INFORMATION

Genevieve Howard
Policy Associate, Workforce Education
p: 360-704-3990
e: ghoward@sbctc.edu

Strategic, coordinated training

Center of Excellence for Aerospace and Advanced Manufacturing

Colleges share cutting-edge curricula designed jointly with aerospace leaders and industry subject-matter experts. Leading the way is the Center of Excellence for Aerospace and Advanced Manufacturing, hosted at Everett Community College. The center is a one-stop hub for the industry and experts to design curricula to be deployed system-wide. Next up for the Center of Excellence is designing an additional center focusing on unmanned aircraft. Aerospace employers and qualified workers can connect easily thanks to online tools available on the center's website at coeaerospace.com.

Job Skills Training Program

Established by the Legislature in 1983, the program offers a dollar-for-dollar matching grant to help businesses train their experienced and new employees. Since then, more than 75,000 workers and 1,000 employers have benefited from the program.

With the Job Skills Program, qualified businesses partner with eligible providers — community and technical colleges, secondary vocational programs, public colleges and universities, apprenticeship trusts, and Washington state-licensed postsecondary schools — to tailor programs for exactly what that business needs. In return, businesses contribute at least 50% of training expenses through cash, in-kind payments or a combination of both.

The program helps employers and workers alike stay up-to-speed in a competitive marketplace, boosting profitability and employability. During the 2021-23 biennium, 126 projects were funded at an average rate of \$127,484. Twenty percent of the funded projects supported training programs in aerospace manufacturing.

Advanced Manufacturing Education Center

Everett Community College's Advanced Manufacturing Education Center (AMTEC), a 54,000 square foot state-of-the-art facility, offers short-term, stackable certificates, giving students credentials along their way to a college degree. Students work in cross-functional teams, giving them a solid foundation in the many aspects of manufacturing in an industry setting.

Sources:

1. "Aerospace Competitive Economics Study 2022," AeroDynamic Advisory, September 2022. <https://choosewashingtonstate.com/wp-content/uploads/2023/02/Aerospace-Competitive-Economics-Study-2022.pdf>
2. Bates, Bellingham, Columbia Basin, Everett, Renton, South Seattle and Spokane.
3. Funding was allocated by EHB 2088 in 2013. <https://app.leg.wa.gov/bills/bills/summary?BillNumber=2088&Year=2013&Initiative=false>

Aerospace Pipeline Committee

Created by the Legislature in 2012, the Aerospace and Advanced Materials and Manufacturing Pipeline Advisory Committee (Aerospace Pipeline Committee) monitors the aerospace industry's employment needs and works with industry partners and the community and technical college system to meet the field's demand. The committee is made up of representatives from industry, labor and education, with the majority from the aerospace industry. The committee recommends how to distribute funding for 1,000 full-time equivalent students allocated by the Washington state Legislature to grow aerospace programs.³ As of 2023-24, funding supports 36 programs at 18 colleges, with 863 FTE funded continuously and 137 continuing to be monitored.

Training across the state

Washington's community and technical colleges work closely with local aerospace and advanced manufacturing employers, tailoring programs to best prepare students for good jobs right away. Some of the programs offered by colleges include:

- Advanced Manufacturing
- Aircraft Electronics Technician
- Airframe/Avionics
- Airline Multi-Engine Crew Resource Management
- Aviation Maintenance
- Commercial Pilot
- Composites
- Cybersecurity
- Drafting and Design
- Electronics
- Engineering
- Industrial Electronics and Robotics
- Industrial Maintenance
- Industrial Power and Control Technology
- Information Systems and Technology
- Logistics & Supply Chain Resilience
- Machining/CNC Technology
- Manufacturing and Fabrication
- Material Sciences
- Mechatronics
- Nondestructive Testing
- Robotics and Artificial Intelligence
- Sheet Metal Technician
- Software Development and Engineering
- Solid Modeling for Manufacturing
- Technical Design
- Welding and Fabrication