

**U.S. Senate Field Hearing on Aviation Workforce
October 24th, 2011**

Testimony by Dr. Joe Dunlap, President, Spokane Community College

For many decades, Washington State has been a center of the aerospace industry, focusing around The Boeing Company and over 600 aerospace and manufacturing industry supply companies statewide. The health of this critical industry is reflected in the economic health of Washington State and the ability of highly-skilled Washington workers to obtain high wage technical careers. Community and Technical College enrollment for 2010-2011 was 161,081 FTEs which is 20,000 FTEs over the funded target level; while headcount was 330,608 students served. Students enrolled in Science, Technology, Engineering, and Math (STEM) courses/ programs have significantly increased over the past five years [see table below].

Year	STEM enrollments	Increase from previous year
2006-07	4049	N/A
2007-08	4190	3.5%
2008-09	4573	9.1%
2009-10	5079	11.0%
2010-11	5697	12.2%

On October 19, 2009, Governor Gregoire allocated \$1.5 million of her discretionary Workforce Investment Act (WIA) funding in support of the aerospace industry. In her directive, the Governor instructed the State Board for Community and Technical Colleges (SBCTC) to distribute the funding for: 1) industry-driven training centers, 2) new equipment, 3) K-12 programs, 4) curriculum alignment, and 5) facilitation of the transfer of research findings into training curricula.

Recognizing that workforce development for the aerospace industry is critical to Washington's economic future, the State Board for Community and Technical Colleges, with assistance from the legislature, began to organize around the Governor's appeal. Funding was appropriated to establish: 1) the Aerospace Joint

Apprenticeship Committee, 2) two aerospace technology centers; the Washington Aerospace Training and Research Center at Edmonds Community College, and the Inland Northwest Aerospace Technology Center at Spokane Community College, and 3) a tenth Center of Excellence [COE] for Aerospace and Advanced Materials Manufacturing at Everett Community College. An inventory of programs and courses taught at the 34 community and technical colleges was developed. In addition, industry helped to identify knowledge, skills and abilities needed by the 600 aerospace related manufacturers and suppliers.

With grant writing support from Everett CC, Spokane Community College took the lead in organizing a consortium known as “Air Washington”, which consists of 12 community and technical colleges, the aerospace technology centers in Edmonds and Spokane, the COE for Aerospace and Advanced Manufacturing, the Aerospace Joint Apprenticeship Committee, and 14 regional Workforce Development Councils, to develop a comprehensive proposal supporting Washington State’s aerospace industry. That proposal was recently funded by DOL for \$20M over three years. The purpose of this grant is to research, develop, design and implement state-of-the-art education, training, and support service necessary to meet Washington State’s growing workforce demands, identified by employer partners in the aerospace industry sectors; as well as to develop a sustainable infrastructure to increase capacity for training aerospace workers in Washington State. Selected occupations that this grant will focus on include: 1) aircraft structure, surfaces, and rigging assemblers, 2) machinists and computer numeric controlled machine tool operators, 3) helpers for installation, maintenance, and repair workers, 4) aircraft mechanics and service technicians, and 5) electrical and electronic assemblers.

More specifically, the Inland Northwest Aerospace Technology Center [INATC], at Spokane Community College supports the aerospace industry in Eastern Washington, which is expected to grow by 40% over the next several years. Spokane Community College offers the following aerospace related programs: 1) Aviation Maintenance Technician degree that includes FAA Airframe and Powerplant certificates embedded into the curriculum *[there are five such programs in the state]*, 2) electronics, 3) hydraulics and pneumatics, 4) machining,

5) welding, and 6) customized business and industry training. Future plans call for the establishment of flight training, air traffic control, and dispatcher programs.

The following curriculum was recently completed this summer: 1) AS 9100, 2) Quality Assurance I & II, 3) Coordinate Measuring Machine, 4) CATIA Level I & II, 5) TIG welding, 5) Avionics and Job Performance Skills, and 6) an Aerospace Summer Camp for high school students was conducted. A two-quarter, short-term composite manufacturing certificate is under development.

Once 5.4 acres of land has been transferred from the Washington Military Department, INATC will relocate from Felts Field in Spokane to the Spokane International Airport to be more centrally located and better able to serve the emerging aerospace workforce in Eastern Washington.

The Center of Excellence [COE] for Aerospace and Advanced Materials Manufacturing, located at Everett Community College, serves as the statewide liaison to business, industry, labor and the state's educational systems for the purpose of creating a highly skilled and readily available workforce critical to the success of industries driving the state's economy and supporting Washington families. Significantly, the COE produced a cross mapping of all 22 Community and Technical College aviation, aerospace, and advanced manufacturing programs to the 32 Boeing Job Codes. This alignment is shared with the state high schools to facilitate their curriculum alignment with college curricula.

Attached is an inventory of community and technical college aerospace programs throughout the State, prepared by the COE, as well as an aerospace manufacturing career tree.

Attachments: 2

Washington State's Aerospace and Advanced Manufacturing Education and Training Organizations

Aerospace Manufacturing Career Tree