

Washington Aerospace Training and Research Center

Introduction

I'm Cyndi Schaeffer, Executive Director of the Business Training Center with Edmonds Community College. The Washington Aerospace Training and Research Center (WATR) is an aerospace training facility located at Paine Field, providing statewide training, by Edmonds Community College – Business and Training Department through an operating agreement with the Aerospace Futures Alliance (AFA).

History

Before I describe the WATR Center, I want to take this opportunity to explain what happened before the Center opened. Approximately six years ago, Senator Cantwell was instrumental in the creation and development of the Center of Excellence – Advanced Materials in Transport Aircraft Structures (AMTAS), where Edmonds Community College, University of Washington, the FAA, and others were members. Your (Senator Cantwell's) office continued to support the college in accessing grants and other funding to support composites training, tools, and equipment. Senator Murray and Congressman Inslee's offices, as well as the AFA, assisted the college in accessing grants and allocations to begin WATR.

Statewide Aerospace Centers

Statewide Aerospace Centers are located on the East and West side of Washington to provide statewide training for aerospace companies. Spokane Community College serves the East side, and the Washington Aerospace Training and Research Center (operated through the AFA and Edmonds Community College) serves the West side.

The intent and mission of these centers is to provide statewide aerospace training through collaborating with local community colleges and delivering training out of its centers. The training delivered out of the centers must be industry driven and have a rapid response. If industry identifies a new need, the centers are expected to develop that training. WATR has recently developed a partnership and agreement with Renton Technical College to deliver WATR trainings in King County.

WATR Center Description

WATR opened in June 2010 through a variety of successful partnerships with the aerospace industry, Snohomish County, Center of Excellence, WDC, AFA, local legislators, and state and federal government. This industry driven center is operated in partnership with the AFA and consults with an AFA industry advisory board.

Workforce Challenges

Increased number of trained entry level job applicants

There are many industry representatives telling us that there are a lot of people out of work, yet there are not enough job candidates with the entry level skills needed to pursue even entry level aerospace manufacturing jobs. While engineering and other long term skills are needed, a large number of in demand jobs can be taught in relatively short time frames. People can continue their education once they are employed, gaining experience, and ultimately filling higher skilled job positions.

Aging workforce

The average age of aerospace employees is approximately 48. The “aging” workforce will result in skilled aerospace workers leaving the industry without skilled workers to replace them. Although the aerospace manufacturing industry has many career opportunities and ladders, today’s youth appear to be unaware of and/or disinterested in pursuing aerospace careers. There needs to be increased recruitment of middle school, high school, and young adults to the industry.

Delivery of training

Training content and delivery needs to be consistent with industry workforce demand, and the content must be industry driven and continually changing. Training must be delivered using state-of-the-art methods that increase student capacity and learning.

Training must be executed quickly with a high level of retention. Training content cannot be static, but must be continually reviewed and modified, if necessary, to ensure it is cutting edge.

WATR Addresses the Challenges

Training developed conducive to industry needs

WATR developed over 20 aerospace courses and a number of certificates requested by industry, including: Core Aerospace Certificate FAA Requirements; Quality Control; Lean for Aerospace, and Non-destructive Testing for Composites, among others.

WATR has delivered these courses and certificates to meet industry demands: containing cutting edge and relevant content; promoting fast and intense learning; serving a larger number of students. Since opening in June 2010, WATR has been offering Core and Assembly aerospace

certificates, on first and second shift. These certificates prepare students for jobs such as aerospace assemblers and aerospace manufacturers.

The courses were developed to be delivered online through very innovative technology that has been welcomed by younger and older students alike. Through an intense online course of study, students are able to move through material when they have demonstrated their knowledge and they can repeat content that is challenging. Following demonstrated knowledge competency, the students participate in a month long hands on student learning experience to allow them to apply their skills. Students successfully navigate through the program in 12 weeks. Using this model, the Center has the capacity to graduate 180 students per month. With the Center's upcoming renovation and the expansion to third shift and weekend courses, the Center will have the capacity to graduate over 350 students per month, each earning two certificates and 19 credits. To expand capacity and better meet industry needs, the WATR Center is partnering with Renton Technical College and other colleges to train more students statewide. In addition, the Center is offering the Aerospace Electrical Assembly Mechanic Certificate. Other trainings WATR has offered include the Applied Technology Manufacturing Certificate, the Composite Certificate; CATIA, Lean and Six Sigma, Quality Control, ESL in Aerospace Manufacturing, and ISO 9000.

Graduates

As of August 31, 2011, 357 students have graduated with Core and Assembly Mechanic certificates. 347 of them have applied for jobs, 291 of them have been interviewed, and 240 of them have received job offers (206 of whom are now working with the remaining in the process of undergoing background checks and drug analysis). Boeing has hired 190 of the 206 employed graduates; other employers include TECT Aerospace, Flight Structures, Norfolk Naval Shipyard,

Bridgeways Manufacturing, AMT, Terry's Machine Giddens Industries, Crane Aerospace, and Primus International. It takes approximately two to three months, once a person graduates to obtain employment in the aerospace field.

Demographics of WATR students

16% of the students were female; 33% non-white; and 24% were under the age of 25. Although, the demographics are encouraging with respect to the number of women and non-white populations, the numbers raise concern regarding the low enrollment of younger students, and the "aging" aerospace workforce. WATR has implemented several strategies to increase younger students:

Cool Girls for Aerospace Project: In collaboration with the Boys and Girls Club, Senator Cantwell's staff, and the AFA, a "Girls for Aerospace Project" is being implemented in November 2011. The "club" will require the 13 to 15 year old girls to make a composite trinket tray, design and produce a personalized keychain using CAD and prototype machines, and make a paperweight using welding equipment. Throughout the training, the girls will view aerospace and manufacturing videos and be introduced to aerospace concepts.

Marketing Campaign: In October 2011, WATR will launch an aggressive advertising blitz in the Alderwood Mall. The campaign may include hanging banners, table top inserts, a T-stand, and a barricade wall. The advertisements will be in the mall for 8-10 weeks targeting younger adults by using Generation Y themes and motivational concepts based on academic studies. During September and late October, WATR will be mailing out 44,000 postcards to residents throughout Snohomish and King County, advertising the WATR Certificate geared to younger adults using Generation Y marketing strategies.

Marketing Videos: WATR has contracted with a video producer to develop several unique marketing videos—one designated to recruit high school students and young people and the other designed to recruit veterans.

Scholarships for High Schools and Skill Centers: WATR is working with skill centers and high schools statewide to recruit transitioning students into the aerospace industry for employment. Thus far, WATR has met with Sno-Isle Skills Center and the Yakima Skills Center to develop agreements. WATR staff will meet with the City of Kent to replicate these agreements with the Renton Skills Center to offer aerospace certificate scholarships to high school students.

How the WATR Center is Reaching Out to Industry:

AFA industry led advisory board: The Aerospace Futures Alliance leads an industry advisory board that provides direction. AFA initiates quick turnaround surveys to evaluate the training needs and existing skill gaps of 650 aerospace suppliers. WATR meets with the advisory board regularly.

WATR staff meets with the Boeing Company and other aerospace companies WATR staff meet with Boeing on a weekly basis to discuss training needs. (These meetings have been ongoing for two years.) Additionally, WATR staff provides regular tours, meets with industry, and industry comes to the WATR site to recruit and interview students and graduates. During all these interactions, companies are asked about their training needs and skill gaps.

Curriculum and training is developed quickly using industry subject matter experts and delivered in a rapid and sustainable manner. Training is developed and delivered to increase

capacity to meet industry demand needs—that it is industry driven and can be modified quickly to match the ever changing needs of the aerospace industry.

Challenges to the WATR Center

Cost of program: The materials and supplies for students to participate in the lab portion of the certificates is extremely high because of the intense practice students are required to complete to gain the necessary competencies and skills. Because of the high costs and tuition, more funding is needed for the student loan program and student vouchers.

This short term training model has proven to be effective for both students and employers. It is an excellent example of education, industry, and government partnering to develop a skilled workforce and an established career pathway. Continuing to fund this important training will help keep the aerospace industry alive and well in Washington state.