



Washington's Community and Technical Colleges STEMing the Skills Gap

“Washington state can ill afford to let thousands of careers quietly disappear simply because we lack trained workers. That’s why our members are working with community and technical colleges around the state to develop training that matches workforce demands. Employers need people proficient in science, technology, engineering, and math. For many students, the road toward a STEM career begins at a community or technical college.”

– Don Brunell, president, Association of Washington Business, April 2013

Putting STEM jobs in reach

Washington could add as many as 110,000 new jobs by 2017 by closing skill gaps – the mismatch between the skills people have and those employers need, according to a March 2013 Washington Roundtable report.¹

STEM professions face the most critical demand. Of the 25,000 jobs vacant for three months or more due to a shortage of qualified candidates, 80 percent are in high-demand STEM and health care fields.² Employers are desperate to find STEM workers, while job-seekers without STEM training are struggling to find work.

It’s time to close this gap by investing in Washington’s community and technical colleges.

Increasing capacity

Employers need multiple levels of STEM education, including short-term training certificates, associate degrees, and bachelor’s degrees. Two-year colleges produce talented graduates at these levels. Students gain skills to enter STEM jobs directly, or transfer to a four-year university.

For example, 24 of Washington’s 34 community and technical colleges offer aerospace-related training. Twenty-eight offer registered nursing and 23 offer practical nursing.



Biology students at Whatcom Community College

Two-year colleges train students for jobs in emerging fields: cyber security, nanotechnology, radiology, composites, and dozens of other STEM professions that drive Washington’s economy. Students get precisely the training employers want and land good jobs when they finish.

Transfers made easy

STEM students can move seamlessly from two-year colleges to four-year universities thanks to associate transfer degrees and agreements that allow credits to transfer in particular majors.

In the 2010-2011 school year, 34 percent of engineering majors in four-year public colleges and universities transferred from a community or technical college with at least 40 college credits or a degree. Most had heavy concentrations of science and math credits.³

Six community and technical colleges participate in the *Washington MESA Community College Program*.

Through the program, under-represented students get additional help in math, engineering, and science so they can excel and transfer to four-year institutions.

Applied baccalaureate degrees in STEM fields are now available at several community and technical colleges. Students build onto their two-year degrees in fields such as radiation and imaging sciences, health care technology and management, nursing, and information systems and technology.

Aligning training to demand

Community and technical colleges forge partnerships with local and regional business leaders to provide training for in-demand STEM jobs. Colleges join forces with local chambers of commerce, business and labor organizations, workforce development councils, and businesses of every size and type across Washington.

Advisory committees

Every college job-training program has an advisory committee made up of leaders in the field of study. These committees keep colleges up-to-date on industry and workforce needs, employment forecasts, industry trends, and new technologies. Faculty members consult industry for “on the ground” skills and experience, and use that knowledge to build and update curricula.

Centers of Excellence

STEM programs can be deployed rapidly across the state thanks to Centers of Excellence. Each center focuses on a targeted industry and is designed to provide fast, flexible, job-relevant programs for community and technical colleges.

STEM-related centers include allied health, aerospace and advanced materials manufacturing, clean energy, information and computing technology, and marine manufacturing and technology.

Community and technical colleges are uniquely positioned to get training programs up and running in a matter of months, not years. Clearly, there’s no time to waste. Investing in community and technical colleges will help close the skills gap now.

Industry forums

In collaboration with the Association of Washington Business, the State Board for Community and Technical Colleges hosted listening sessions at each Center of Excellence in March and April 2013 to discuss industry skill gaps.

Colleges will use the results to revise, create, and enhance training programs that meet workforce needs.

Sources:

1. “Great Jobs Within our Reach: Solving the Problem of Washington State’s Growing Skills Gap,” Washington Roundtable, March 2013
2. Ibid
3. SBCTC data warehouse