

# CTE Monthly

July 2013

## CTE Quick Facts

### Did you know?

- ▶ 27 percent of people with less than an associate degree, including licenses and certificates, earn more than the average bachelor's degree recipient.<sup>i</sup>
- ▶ CTE students earning dual credit who later enrolled in the City University of New York were 9.7 percent more likely to pursue a bachelor's degree, had a .13 higher GPA in their first semester and had earned 10.65 more credits 3-plus years after enrolling.<sup>ii</sup>

### CTE: The Key to Economic Development in Advanced Manufacturing

ACTE has launched a new Sector Sheet that explores advanced manufacturing career opportunities and describes [CTE's role in growing the qualified workforce for advanced manufacturing](#).

Manufacturing accounted for \$1.87 trillion, or 11.9 percent, of 2012 U.S. gross domestic product; provides about one in six private-sector jobs; and pays family-sustaining wages. Despite media attention on manufacturing job losses, 2 million job openings in manufacturing are expected through 2018.<sup>iii</sup> In addition, the manufacturing sector has been vulnerable to skills gaps.

Learn more about how CTE prepares high school, postsecondary and adult students for these careers through Career Clusters, pathways and courses; work-based learning experiences; career and technical student organization enrichment experiences; and opportunities to earn certificates, degrees and industry-recognized certifications. Future Sector Sheets will be released later this year for fields such as health care and energy.

<sup>i</sup> Harvard Graduate School of Education, [Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century](#), 2011.

<sup>ii</sup> Mechur Karp et al., [The Postsecondary Achievement of Participants in Dual Enrollment: An Analysis of Student Outcomes in Two States](#), NRCCTE, October 2007.

<sup>iii</sup> ACTE, [CTE: The Key to Economic Development in Advanced Manufacturing](#), July 2013.

<sup>iv</sup> Georgetown University Center on Education and the Workforce, NRCCTE and NASDCTEc, [Career Clusters: Forecasting demand for high school through college jobs: 2008-2018](#), 2011.

<sup>v</sup> Bilbao-Osorio et al., [The Global Information Technology Report 2013](#), World Economic Forum and INSEAD, 2013.

## Career Spotlight



With rapidly-changing Internet, computer and mobile technologies, it is no wonder that the Information Technology (IT) Career Cluster<sup>®</sup> is one of the fastest growing sectors in the United States, projected to grow by 22 percent by 2018.<sup>iv</sup>

The IT field comprises high-demand jobs in areas like network systems, programming and software development, interactive media, and information support and services. Research shows that the widespread use of connected digital services boosts countries' economic output and helps create high-demand IT jobs.<sup>v</sup> As the demand for IT services rises, career and technical education (CTE) programs in the IT Career Cluster are preparing students for these high-skill positions.

The [iTech Academy Miami](#) in Miami, Florida, provides students with focused knowledge and training in IT and other science, technology, engineering and mathematics (STEM) related areas. In partnership with area universities and businesses, iTech Miami focuses on digital design and coding through the lens of video game and web application design. iTech faculty use a problem-based, hands-on approach to engage students and prepare them with highly technical skills. While the school, which is a magnet program, just completed its first year, it has already received media interest; the *Huffington Post* featured an [article](#) on iTech Academy last year to highlight its innovative approach. By linking CTE curriculum with the specific skills needed in the IT industry, iTech Academy and similar CTE programs are effectively preparing students to succeed and helping businesses find qualified workers.

## FY 14 Appropriations Update: Investing in CTE is a Priority!

This month, the Senate Appropriations Committee passed a 2014 Labor, Health and Human Services, and Education appropriations bill that seeks to reverse the painful cuts from sequestration. Senate appropriators approved \$1.123 billion in funding for CTE state grants provided through the Carl D. Perkins CTE Act (Perkins)—equivalent to the pre-sequester funding level. The Senate bill is a step in the right direction toward a greater investment in CTE, which is working to ensure that students have the academic, technical and employability skills that are needed for expanding fields like engineering, IT, advanced manufacturing and health care.

Funding for Perkins has been reduced by over \$100 million since 2010. As a result of sequestration, Perkins will be further reduced by \$58 million in 2013 alone. Dozens of states are currently receiving funding allocations at or below the level they received in 1998. As the House Labor, Health and Human Services, and Education Appropriations Subcommittee prepares to mark up a bill on July 25, we hope that they will recognize the importance of Perkins funding for high schools, CTE centers, community and technical colleges, employers and millions of CTE students nationwide. It is time for the House to make funding CTE a top priority!

## School Spotlight

### Walla Walla Community College

A co-winner of the 2013 Aspen Prize for Community College Excellence, [Walla Walla Community College](#) (WWCC) excels at developing students for jobs and helping to drive growth in the region. Walla Walla has worked closely with businesses, adding and trimming courses based on industry needs. When data showed that the region could support more nurses, it doubled the nursing program, while an energy program provides technicians for the area's growing supply of wind turbines. The school's enology and viticulture program has spurred the creation of national wine distribution and related facilities, and has fostered the region's hospitality sector.

WWCC is also known for supporting its community. For example, it has established a water management center that works with the local Native American tribe to restore the area watershed, and it partners with the Washington State Department of Corrections to educate prisoners.

In addition, Walla Walla mandates personal, academic and career advising and uses technology to counsel students and track their progress to a degree. A sign of the school's success is graduate earnings: in 2011, new graduates earned \$41,548, which is about 80 percent higher than the wages of other new hires in the region.<sup>vi</sup>



Photo courtesy of [Walla Walla Community College](#).

### Student Spotlight



Photo courtesy of [Oklahoma CareerTech](#).

While a student at Comanche High School in Oklahoma, Jordan McMasters joined the Biomedical Science Academy at [Red River Technology Center](#) because he wanted a challenging environment in which to prepare for college and career. At the academy, Jordan acquired content knowledge and skills in mathematics, biology, the

human body and disease mechanisms. He also familiarized himself with the expectations and workload that he would face in postsecondary education.

Armed with this experience, Jordan is now at Oklahoma State University majoring in animal science with a biotechnology option. He plans to obtain a master's degree in animal nutrition and envisions a career formulating feed rations in a laboratory or working at a cattle feedlot.<sup>vii</sup>

### Bachelor's Degree Not Required For Many STEM Jobs

STEM is portrayed as the arena of the highly educated—bachelor's and advanced degree holders—but a recent Brookings report, [The Hidden STEM Economy](#), shares that half of STEM jobs are for workers with less than a four-year degree.

In 2011 there were 26 million U.S. jobs that required a high level of knowledge in STEM. These jobs can be found in every sector, although utilities, professional services, construction, mining and manufacturing are the five most STEM-intensive sectors. Health care can also be regarded as a STEM-intensive sector, depending on the definition used.

About 50 percent of all STEM jobs are open to workers with less than a bachelor's degree, and about 30 percent of today's STEM-intensive jobs are in blue collar fields. These include skilled technicians who produce, repair and install high-tech equipment and maintain the nation's energy supply.

These subbaccalaureate STEM jobs are available in every large metropolitan area and pay \$53,000 per year on average, about 10 percent higher than jobs with similar educational requirements.<sup>viii</sup> Luckily, CTE excels at providing education and training to help youth and adults take advantage of these opportunities.

vi The Aspen Institute, [2013 Aspen Prize for Community College Excellence Awarded to Santa Barbara City College and Walla Walla Community College](#) and [Walla Walla Community College profile](#).

vii OKCareerTech.org, [CareerTech Champions Issue 24](#).

viii Rothwell, J., [The Hidden STEM Economy](#), Metropolitan Policy Program at Brookings, June 2013.



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