

# CTE Monthly

January 2014

## CTE Quick Facts

### Did you know?

► According to the general public and hiring decisionmakers recently polled by Northeastern University, the most important step the U.S. can take to better prepare students is to expand apprenticeship and other professional work programs for college students.<sup>i</sup>

► In fall 2012, about 25 percent, or more than 50 million U.S. adults, held a professional certification, license or educational certificate.<sup>ii</sup>

## New Publications, CTE Advocates on Capitol Hill

NASDCTEc recently released a new policy paper entitled [CTE Is Your STEM Strategy](#), exploring the inherent relationship between CTE and STEM goals, elements and expectations.

In addition, ACTE has published a new [case study](#) in its *Taking Business to School* series on the Toyota Technician Training and Education Network, which partners with 40 public and private institutions across the country to prepare service technicians for its Toyota, Lexus and Scion dealerships. Check out both of these resources today!

Finally, CTE advocates from around the country will converge on Capitol Hill for ACTE's [National Policy Seminar](#), March 3-5. Attendees will learn about the latest in education and workforce policy and visit their state legislators. To learn more, contact [Catherine Imperatore](#) at ACTE.



## Career Spotlight

The Manufacturing Career Cluster® is, to put it simply, about making things. Through the planning, management and processing of materials into final products, manufacturing is the engine that powers the U.S. economy. In addition to these functions, the Manufacturing Career Cluster also includes career pathways ranging from Logistics and Inventory Control to Health, Safety and Environmental Assurance. With such a sweeping array of pathways to choose from, it comes as no surprise that the American manufacturing sector, when looked at on its own, ranks as the world's tenth largest economy.<sup>iii</sup>

Despite manufacturing having the largest multiplier effect out of all other sectors in the U.S. economy—every \$1 spent generates \$1.35 in additional economic activity—the manufacturing industry was among the hardest-hit economic sectors during the most recent recession.<sup>iv</sup> Declines in employment hit their lowest point in 2009 and are projected to return to pre-recession levels throughout the next decade.<sup>v</sup> Approximately 2 million additional openings are expected from retirements and other replacement needs of the sector.<sup>vi</sup> Manufacturing is also experiencing a period of transformation and is increasingly becoming more involved in activities requiring advanced technologies. As this trend continues, more than 40 percent of manufacturing jobs will require some form of postsecondary education by 2018.<sup>vii</sup>

The [Tri-Heights Career Prep Consortium](#), a partnership between three area high schools in Northeast Ohio, is supporting this revival in manufacturing through its Engineering Technology Program. Students enrolled in the program have the opportunity to learn a variety of manufacturing- and engineering-related skills that emphasize current industrial practices and design procedures.<sup>viii</sup> Course offerings in material sciences and manufacturing processes introduce students to the main concepts that provide a foundation for their field before progressing to more hands-on coursework, including Computer Aided Design (CAD) and power systems. These rigorous course offerings will continue to expand as the program transitions to the Project Lead the Way (PLTW) curriculum.<sup>ix</sup>

Another encouraging aspect of Tri-Heights Consortium's approach is their focus on ensuring that jobs are available for students once they have completed the program. Through partnerships with area businesses such as Arce-Mittal, Eaton Corporation and Lincoln Electric Holdings Incorporated, students have an opportunity not only to explore the opportunities available to them after graduation, but also to build relationships with these potential employers. As Yvonne Schiffer, instructor for the program noted, this approach is a "win-win for everybody."<sup>x</sup>

## \$53 Million Increase to Perkins in Omnibus Appropriations Bill

The FY 2014 Consolidated Appropriations Act that was passed by Congress last week includes a \$53 million increase in the federal investment in CTE! The omnibus bill will restore over 90 percent of the cut in Perkins CTE state grants that occurred in FY 2013 as a result of sequestration. It also contains a provision that will change the name of the Office of Vocational and Adult Education (OVAE) at the U.S. Department of Education to the Office of Career, Technical and Adult Education (OCTAE). This change will more accurately reflect the expanding scope of CTE in the 21st century and the terminology change that was made within the Perkins CTE Act during the 2006 reauthorization.

This landmark bill is a huge step in the right direction for CTE funding. ACTE and NASDCTEc would like to thank the 431 Members of Congress who voted overwhelmingly in favor of this critical federal investment in our nation's workforce!

i Northeastern University, [Preparing Graduates for Global Success](#) survey.

ii U.S. Census Bureau, [Measuring Alternative Educational Credentials: 2012](#), January 2014.

iii The Manufacturing Institute, [U.S. Manufacturing is the World's Tenth Largest Economy](#).

iv Manufacturing.gov, [U.S. Manufacturing In Context](#).

v Ibid.

vi Georgetown Center on Education and the Workforce, [Career Clusters: Forecasting demand for high school through college jobs: 2008-2018](#), 2011.

vii Ibid.

viii Cleveland Heights-University Heights City School District, [Engineering Technology](#).

ix Cleveland Heights-University Heights City School District, [Engineering Program Growing](#).

x R. McCafferty, "Manufacturing Interest at an Early Age," *Crain's Cleveland Business*, May 20, 2013.

## School Spotlight

### Spokane Valley Tech

[Spokane Valley Tech](#) is an exciting learning environment for junior and senior students from high schools in the Spokane area of Washington, a venue for gaining technical skills and experience in growing industries with a focus on career and college readiness. A collaborative effort by Central Valley, East Valley, Freeman and West Valley School Districts, Spokane Valley Tech opened in September 2012 with four programs: aerospace and advanced manufacturing, cosmetology, fire science and sports medicine. For the 2013-2014 school year, the school added programs in advanced biomedical and engineering applications as well as the Avista Center for Entrepreneurship and the Academy at Spokane Valley Tech, which integrates core academics around a STEM theme.

Competency-based individualized instruction is used to take each student from their current academic and technical level to a higher level of educational attainment. Courses include options for college credit and state and national certifications and licenses. In addition, an internship program was launched in partnership with the Spokane Area Workforce Development Council and Greater Spokane Incorporated. "Work 101" partners high school students with area businesses to provide an opportunity to learn in a real-world setting. Internship development is focused on high-growth, high-demand industries in the region, including biosciences, the medical field, engineering and manufacturing.

Programs in bioengineering and computer science will be added for the 2014-2015 school year.<sup>xi</sup>



Photo courtesy of Spokane Valley Tech.

## Student Spotlight



Photo courtesy of PGCC.

Carlos Fuentes graduated high school and was accepted to the University of Maryland at College Park but found tuition out of reach financially. After researching his options, he decided to enroll in [Prince George's Community College](#) (PGCC) in Maryland. While at PGCC, he was active with the college's STEM Collegian Center and helped develop a campus rain garden that facilitates hands-on learning for environmental biology students. In addition, Fuentes was a student representative at Achieving the Dream's 2012 Annual Meeting on Student Success.

Fuentes graduated last spring from PGCC and transferred to the University of Maryland. He would like to practice nursing in the military and plans to eventually become a nurse practitioner, specialize in acute care or enter a career in health management.

"I've really enjoyed all of my classes and had amazing, knowledgeable, experienced professors who helped me in so many ways," says Fuentes. "There is no way you could possibly fail with all the options available, from tutoring to one-on-one writing sessions. At Prince George's Community College, they help you succeed."<sup>xii</sup>

## Slipping PISA Scores Speak to Need for Applied Skills

The United States has fallen farther behind its fellow OECD countries in the performance of 15-year-olds on reading, science and math assessments. American 15-year-olds ranked 17th in reading, 21st in science and 26th in mathematics among the 34 OECD countries in the [2012 Programme for International Student Assessment](#) (PISA).

The U.S. slipped from its rankings in the 2009 PISA, although average student scores were not measurably different from average scores in previous years. A number of non-OECD countries and provinces as well as three U.S. states also participated in the 2012 PISA. Shanghai-China, Singapore and Hong Kong-China were the top performers in all three domains. Massachusetts and Connecticut performed above the nation as a whole in math, while Florida lagged.<sup>xiii</sup>

The PISA not only measures basic competencies but also requires students to apply what they have learned to problems set in real-world contexts; this focus is similar to the recent [OECD Survey of Adult Skills](#), in which the U.S. also performed below the average. A greater focus on rigorous CTE integrated with academics in deeper, real-world learning could be the key to unlocking the potential of U.S. youth and adults.

<sup>xi</sup> Spokane Valley Tech [website](#); additional information from SVT staff.

<sup>xii</sup> Prince George's Community College, [Student Success Stories](#).

<sup>xiii</sup> National Center for Education Statistics, Selected Findings from the [2012 Programme for International Student Assessment](#).



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