

CTE Monthly

November 2012

CTE Quick Facts

Did you know?

- Associate degree holders from Virginia who graduate from an occupational/technical program out-earn other associate degree holders by about \$6,000 per year, and even out-earn bachelor degree holders by approximately \$2,500.ⁱ
- Skilled trade workers, engineers and IT staff are the top three jobs employers are having trouble filling in the U.S.ⁱⁱ

Taking Business to School: Success Stories

ACTE's [case studies on successful business-education partnerships](#) examine how these collaborations help students and working learners obtain the skills needed for workplace success and help businesses develop and retain talent. These partnerships are, in many cases, only possible because of the quality education and workforce preparation already being delivered by CTE programs and community and technical colleges nationwide. From these 3-page briefs you can learn about such success stories as:

- Metropolitan College, a unique partnership between UPS, the University of Louisville, Jefferson Community and Technical College, and the Louisville Metro and Commonwealth of Kentucky governments, to develop an educated workforce for UPS and the region.
- Siemens's collaboration with Central Piedmont Community College on an apprenticeship program leading to a degree in mechatronics engineering and full-time employment with Siemens.

ACTE's latest publication in the series profiles Hypertherm's training relationship with Vermont HITEC and its positive results.

Career Spotlight



CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS

Manufacturing

Career and technical education (CTE) plays an important role in preparing students with highly relevant skills so they are qualified to land challenging manufacturing positions.

Students pursuing careers in manufacturing receive training for positions such as machinists; production workers; maintenance and repair workers; production, planning and expediting clerks; first-line supervisors; and computer repairers. Today's manufacturing positions often require skills in science, technology, engineering and math (STEM) to keep pace with changing technologies across the field.

According to the U.S. Bureau of Labor Statistics, manufacturing degrees and credentials pay off; the average compensation for a manufacturing worker in 2011 was \$5,000 per year more than non-manufacturing workers. Manufacturing workers also received a higher level of benefits.

Though nearly half of current manufacturing positions are filled by workers with a high school diploma, postsecondary education and training are more often required of these increasingly complex positions. By 2018, 42 percent of manufacturing jobs are expected to require at least some postsecondary education and training.^{iv} CTE schools, such as [Arkansas Northeastern College](#), offer associate degrees in Advanced Manufacturing to prepare students with knowledge and skills in advanced manufacturing production processes, equipment, design and operation. The program, which responds to the region's demand for advanced manufacturing workers, prepares students for maintenance technician and team leader positions.

CTE programs across the nation offer demanding coursework and work-based learning experiences that lead students to the degrees and credentials needed to succeed in manufacturing careers.

Sequestration Could Impact More Than One Million CTE Students

As Congress grapples with major fiscal issues during the lame duck session, we urge you to find a balanced approach to prevent cuts to critical education and training programs. Sequestration will have a [major impact](#) on the many youth and adults—94 percent of all high school students and 13 million postsecondary students—who participate in CTE to develop academic, technical and employability skills.^v If Congress does not act to avoid sequestration, the Carl D. Perkins Career and Technical Education Act (Perkins) stands to lose approximately \$92 million in July 2013 alone. More than 1 million students will be negatively impacted and less prepared to meet their future career goals and the needs of business and industry for a skilled workforce.

Decisions affecting FY 2013 Perkins funding are also critical, and we hope that Congress will come to a quick agreement in the coming weeks to ensure a stable CTE funding stream and avoid any reductions in funding for the 2013-14 school year. After several years of eroding or stagnant funding, it's time to invest in CTE and ensure that today's students are prepared for tomorrow's careers!

ⁱ College Measures' Economic Success Metrics Project, [The Earning Power of Recent Graduates From Virginia's Colleges and Universities](#), 2012.

ⁱⁱ Manpower Group, [Talent Shortage Survey Results](#), 2012.

ⁱⁱⁱ The Manufacturing Institute, MAPI and National Association of Manufacturers, [Facts About Manufacturing](#).

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

^v U.S. Department of Education, National Center for Education Statistics, High School Transcript Study, 2009; U.S. Department of Education, National Center for Education Statistics, IPEDS Fall Enrollment Survey, 2009 [American Association of Community Colleges (AACC) analysis]; AACC membership database, 2012 [AACC analysis].

School Spotlight

Yavapai College

Arizona's [Yavapai College](#) offers more than 70 programs of study at six campuses, including the Agriculture Technology Management program, which encompasses a wide range of specialties applicable to today's agriculture industry. Yavapai earned the Outstanding Postsecondary/Adult Agricultural Education Program Award for the Western U.S. from the National Association of Agricultural Educators in 2005 for its agribusiness program.^{vi}

The applied science degree in Agriculture Technology Management includes cutting-edge courses on microcomputers in agriculture, agribusiness management, agricultural mechanics and more. Yavapai also responds to new needs in the field, having recently launched a program in viticulture and oenology, the only one of its kind in Arizona.

Yavapai's 21st century facility, the Chino Valley Agribusiness and Science Technology Center, provides hands-on experience in high-tech facilities and is Silver LEED certified. The building site itself is a center of learning, with landscaping, rainwater harvesting, solar water heating, a geothermal heat pump system and an energy management control system. A large greenhouse, fish hatchery, equestrian arena, lake and wetlands complete the learning landscape.^{vii}



Photo courtesy of Yavapai College

Student Spotlight



Profile and photo courtesy of [Utah CTE](#)

Brendan Abbott, a recent graduate of [Mountain View High School](#) in Orem, Utah, participated in many facets of CTE that prepared him for his desired career as a Registered Nurse. Throughout high school, Brendan took many CTE classes in the Health Science Education program area. Plus, in HOSA, the career-technical student organization for health careers, Brendan held several leadership positions—National HOSA Voting Delegate, Utah State HOSA Secretary, Utah State HOSA Vice President and Utah State HOSA President.

In addition, Brendan completed an internship in radiology at the Utah Valley Regional Medical Center (UVRMC). "My internship at UVRMC allowed me to see several careers in action—medical secretaries, registered nurses, nurse practitioners and radiological technicians. ... I know that a career in the medical field is the right choice for me!" says Brendan.

Brendan received a CTE Scholarship and Tuition Award to Utah Valley University (UVU) and a scholarship through National HOSA. Brendan plans to continue his studies in nursing at UVU. "I believe that my coursework, my HOSA leadership experience and hands-on experience at UVRMC provided me a foundation for my chosen career ... I know that my CTE courses will have an impact on my college education. I believe they have given me an educational advantage through early preparation," says Brendan.

Definition of Career Readiness Released

The [Career Readiness Partner Council](#)—leaders from national education and workforce organizations, including ACTE and NASDCTEC, with the goal of bringing clarity and focus to what it means to be career ready—have recently released a [definition of career readiness](#). The definition states that "a career-ready person effectively navigates pathways that connect education and employment to achieve a fulfilling, financially secure and successful career. To be career ready in an ever-changing global economy requires adaptability and a commitment to lifelong learning, along with mastery of key knowledge, skills and dispositions that vary from one career to another and change over time as a person progresses along a developmental continuum."^{viii} The definition further elaborates on two key components:

Academic and Technical Knowledge and Skills: A career-ready person has competence in a wide range of academic subjects grounded in rigorous internationally benchmarked state standards such as the Common Core State Standards. A career-ready person also has technical-skill proficiency aligned to a chosen career field and pathway and can apply both academic and technical learning in the context of a career.

Employability Knowledge, Skills and Dispositions: A career-ready person understands his or her own interests, talents and weaknesses and has a firm grasp of the skills and dispositions needed for success in the global economy. These include managing transitions from school to work and back again, and from one occupation along a career pathway to another; clear and effective communication skills; critical thinking and problem solving; the ability to work in teams and independently; effective use of technology; and more.

CTE, which integrates academic, technical and employability skills, is at the forefront in developing the career-ready workforce!

vi National Association of Agricultural Educators, [Outstanding Postsecondary/Adult Program Awards](#).

vii ACTE, "School Spotlight: Yavapai College," *Techniques Magazine*, April 2012.

viii Career Readiness Partner Council, [Building Blocks For Change: What it Means to be Career Ready](#), 2012.



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