



**Business-education
Partnerships in Career
and Technical Education:**

**DRIVING AMERICAN
COMPETITIVENESS**

Program Profiles



PHOTO COURTESY OF CHATTANOOGA STATE COMMUNITY COLLEGE

Developing a productive and adaptable workforce that is competitive in the global economy is key to American excellence and prosperity. An important way career and technical education (CTE) programs can achieve this goal is by ensuring that education and business are working together to equip students with the skills vital to careers and employer needs. Learn more about this topic with the following program profiles.

Volkswagen Prepares Auto Technicians in Tennessee

The Tennessee Technology Center at Chattanooga State Community College and the Volkswagen Group of America Chattanooga Operations have teamed up to produce some of the best trained technicians and craftsmen in the automotive industry. The three-year Automation Mechatronics Program (AMP) and Car Mechatronics Program (CMP) both offer students a comprehensive learning environment that blends classroom and laboratory instruction at the state-of-the-art Volkswagen Academy with paid, on-the-job training experience in the Volkswagen plant. The programs are modeled after the Volkswagen apprenticeship program in Germany, and Volkswagen has direct input into curriculum development. Both training programs include classes in fault analysis, welding, hydraulics and pneumatics, and technical drawing. AMP students are additionally trained in machining, electricity, robotics and more, while CMP students learn about metalworking, automotive mechanical and electronic systems, protection systems and diagnostics. Successful completers will receive a job offer from Volkswagen, a technical diploma from the Tennessee Technology Center at Chattanooga State and a certificate from Volkswagen Chattanooga. Students who plan to pursue an Associate of Applied Science degree in engineering technology will earn at least 30 credit hours of advanced placement toward a 60-hour degree program.

An Education in Aerospace for New York City Students

For more than 75 years, Aviation High School (AHS), a public New York City high school in Queens, has set students on a direct pathway to careers in aviation maintenance and the aerospace industry. Combining rigorous academic coursework with technical training, graduates from AHS can earn Federal Aviation Administration airframe and/or power-plant certifications. One of the strengths of AHS's program is the close relationship between the school and the aviation industry. For example, in addition to using state-of-the-art equipment purchased by the school, AHS students also work on a functioning 727 aircraft donated by FedEx. To create more real-world instructional opportunities, AHS has partnered with airline companies to develop an on-site classroom located in an annex at J.F.K. International Airport. Students also intern with airline companies, such as Delta and JetBlue, as well as with the airport. While the primary goal of AHS is college preparation, students are immediately ready for employment upon graduation, and entry-level jobs in these fields typically earn \$50,000-60,000 annually. Sixty percent of AHS's students are from low-income families, yet the school boasts an 88 percent graduation rate, compared to 57 percent citywide.

UPS Provides Flexible Training for Kentucky's Workforce

Metropolitan College, a unique partnership between UPS, the University of Louisville, Jefferson Community and Technical College (CTC) and the Louisville Metro and Commonwealth of Kentucky governments, develops an educated workforce for UPS and the region by helping UPS employees complete postsecondary education. Students who are



interested in Metropolitan College can enter in two ways. The first is through UPS's School-to-Work program at partner high schools. In this program, students attend their high school in the morning, work at UPS in the afternoon and take a Jefferson CTC course twice a week. Students in the School-to-Work program receive elective credit and valuable work experience. They can also earn up to six college credit hours by their high school graduation and receive automatic transition into the Metropolitan College program. Individuals can enter Metropolitan College a second way: as UPS employees who work the night shift and are enrolled at either the University of Louisville or Jefferson CTC. Metropolitan College students receive tuition and book reimbursement. In addition, UPS provides academic bonuses and students have access to career planning. Since its inception, this innovative partnership has helped thousands receive a free education and on-the-job training, while lowering the UPS turnover rate for new hires from more than 70 to less than 20 percent.

Texas Students Take on Engineering and Architecture

At Lake Travis High School (LTHS) in Texas, career-focused institutes are partnering with businesses to develop the future workforce. In the school's Institute of Math, Engineering and Architecture, students progress through a rigorous academic and technical curriculum, including Project Lead the Way pre-engineering courses, and participate in internships, job shadowing and site visits to facilities such as National Instruments. LTHS's Independent Study Mentorship Program enables students to work yearlong with mentors at businesses of their choosing; industry partners include ESPN as well as architecture and engineering firms. Students have the opportunity to earn industry-recognized certifications and articulated credits with Austin Community College and Texas State University—San Marcos. Much of the expansion and integration of the engineering program at LTHS was made possible by a grant from Siemens Building Technologies, which fostered the Institute, provided business and industry externships for teachers and connected students with the professional science, technology, engineering and mathematics (STEM) community.

Milacron Cultivates Technical Talent in Ohio

Milacron, a global supplier of plastics-processing technologies and precision machining, is developing its future workforce with the help of the Great Oaks Career Campuses in Ohio. Students enrolled at any of the four Great Oaks Career Campuses can participate in a two-year introduction and induction program. In their junior year, students have the opportunity to tour the Milacron facilities and job shadow a number of roles within the company. As seniors, they enter the co-op program, which allows them to learn job-specific skills and earn money while finishing their studies. In addition to the co-op program, Milacron offers complete tuition reimbursement to all of its full-time employees who are pursuing a degree or working toward a manufacturing, engineering or finance certification. These talent acquisition programs have allowed Milacron, a growing company that expects to lose about 40 percent of its workforce to retirement over the next few years, to ensure a steady pipeline of prepared, educated and excited employees.

IT Students Innovate in California

The Technology Academy at the Foshay Learning Center, a K–12 school in South Central Los Angeles, integrates core academics with training in information technology and dynamic work-based learning opportunities as part of the California Partnership Academies initiative. Students have multiple opportunities to take advanced courses and earn the Internet and Computing Core Certification (IC3) as well as Adobe certifications. Businesses closely partner with the school, offering internships and mentoring, including mock interviews, feedback on digital portfolios and job-shadowing opportunities. Tech Academy students have interned with international advertising design firms; FOX, where they learned to rebuild computers; University of Southern California's Game Lab, where they developed and are testing a video game about applying to college; and Iridescent Learning, where students are creating mobile phone applications. Impressively, in 2009 about 80 percent of Tech Academy graduates satisfied the "A through G" course requirements for admission to the California State University and University of California, compared to 35 percent of graduates across the state.