



Community Colleges and Economic Recovery: The IT Connection

How Cisco Networking Academy Can Help Colleges Meet the Challenge

Cisco® Networking Academy® is ready to help American students and workers prepare for sustainable, high-paying jobs by teaching them in-demand IT and networking skills. With academies located in high schools, community colleges, universities, and nontraditional settings, the program provides technical skills through timely, focused curricula mapped to industry certifications. Graduates know how to perform the tasks that IT-reliant organizations require—work that will become even more important as planned improvements to the nation's digital infrastructure go forward.

The current economic crisis has been called the worst downturn since the Great Depression, but when it comes to generating new jobs, there is one major difference between the 1930s and today. According to Georgetown University's Center for Education and the Workforce, more than half the positions created by the American Recovery and Reinvestment Act (ARRA) will require at least some postsecondary education.

Looking over the broad cross-section of programs and initiatives funded by ARRA, one theme stands out: technological enablement. Many of the jobs that will be created in various sectors of the U.S. economy in the next several years, whether through ARRA or private investments, will require some measure of IT and networking expertise. The nation is counting on these new "innovation economy" jobs to help foster economic growth and stability.

According to research conducted by [Foote Partners](#), 28 IT skills and certifications have increased in value in 2009, even in the face of the downturn. "The evidence is clear from six full months of 2009 trend data now available that employers are depending on IT's leadership and ability, not only in running operations efficiently and cost-effectively, but also in developing and delivering products and services that keep their companies globally competitive in very uncertain market conditions," says David Foote, CEO, Foote Partners.

A Leading Role for Community Colleges

Community colleges are leading the way in preparing a diverse population of students to meet the challenges posed by these initiatives. "Faced with high tuition costs, a weak economy, and increased competition for admission to four-year colleges, students today are more likely than at any other point in history to attend one of the nation's 1100 community colleges," according to a recent [Brookings Institution](#) commentary. "Annually, community college enrollment is increasing at more than twice the rate of that at four-year colleges. . . . The rise of these institutions reflects their important roles in training workers, especially first-generation college students, for well-paying, high-demand jobs, and in providing students a bridge to even higher levels of education."

In July 2009, the Obama Administration proposed a \$12 billion plan to support U.S. community colleges by funding job training and retraining programs. Referred to as the American Graduation Initiative, the plan is designed to increase by 5 million the number of community college graduates over the next 10 years. In announcing the initiative, President Barack Obama said, "It will reform and strengthen community colleges. . . from coast to coast so they get the resources that students and schools need—and the results workers and businesses demand."

To help build the skilled workforce of the future, community colleges need to align their curricula, degrees, and certificates with the new IT jobs being created and the skills employers need. Whether they want to go directly into the workforce or plan to enter a four-year institution, community college students can benefit from a proven digital technology curriculum that teaches real-world skills using the latest pedagogical techniques and interactive tools. Cisco Networking Academy offers exactly what many of these students are looking for. To date, 50 percent of all U.S. community colleges have implemented Networking Academy courses.

Where Economic Stimulus and IT Intersect

Major initiatives that depend heavily on IT and networking skills are included in the approved ARRA stimulus package and the proposed 2010 U.S. budget.

These initiatives include:

- Modernizing healthcare information systems so that they can better serve patients, caregivers, and providers (\$20 billion)
- Nurturing a green economy by supporting jobs related to energy efficiency and renewable resources (\$500 million)
- Extending broadband communications to underserved and unserved areas, and connecting schools, libraries, public computer centers, and other facilities to the Internet (\$7.2 billion)
 - Building a nationwide smart electrical grid that uses advanced technologies to transmit and distribute power more efficiently and intelligently, with the aims of conserving energy, expanding generation sources, and reducing costs (\$11 billion)
- Bringing Social Security Administration IT systems up to date (\$500 million)
 - Helping to safeguard information accessible through the Internet and local networks through cybersecurity (\$355 million in the proposed budget)

“In this economic downturn, our colleges are on the front lines of ensuring that students of all ages have the skills and training necessary to find jobs to sustain themselves and their families. Never have community colleges been more important to our nation’s future.”

—Dr. Arthur Anthonisen, Chair,
Association of Community College
Trustees

Cisco Networking Academy: “Shovel-Ready” IT Education

As state governments and educators act to put economic stimulus funds to work as quickly and effectively as possible, they can look to Cisco Networking Academy for a well-established education program that teaches foundational and advanced IT and networking skills to a wide variety of students in a broad spectrum of educational environments. Networking Academy works closely with high schools, community colleges, and universities, as well as federal, state, and local governments and nonprofit organizations, to create successful educational partnerships worldwide. What’s more, Networking Academy’s innovative curricula meet the “shovel-ready” test: courses can be added quickly and economically. In the United States, more than 128,000 students attend classes in 2200 academies each year. There are academies in over 50% of American community colleges.

Three Case Studies

The [Center for System Security and Information Assurance](#) (CSSIA) is a consortium of seven academic institutions in five states dedicated to developing and evaluating cybersecurity curricula and offering training programs to community college and university faculty, secondary school faculty, and students across the region. Led by [Moraine Valley](#)

“There is a growing recognition among policymakers at all levels of government that the nation’s community colleges provide the most logical—and, for all practical purposes, the only—foundation for the kind of broad-based workforce development system that will be needed to meet industry demand for skilled talent.”

—Julian L. Alssid, Executive Director,
Workforce Strategy Center of New York

[Community College](#) located in the Chicago area, and supported by the National Science Foundation, CSSIA is the first comprehensive center of its kind in the Midwest. A Cisco Networking Academy Training Center was established at the college in 1998, and academy courses are an integral part of the curriculum. CSSIA has developed nine undergraduate courses, nine graduate courses, and a variety of workshops that can be used as models by other institutions.

“CSSIA has become a pipeline for qualified graduates in information security. CSSIA’s research and working relationships with business partners have resulted in dozens of new degree and certificate programs. The staff has an excellent reputation in faculty training as well as strategic partnerships with some of the top Cisco Networking Academy locations and instructors in the country.”

—Lou Balek, CSSIA Information Security Specialist, Moraine Valley Community College

“Coming to Moraine Valley was a great experience,” says graduate Carlos Marquez, Jr. “I was able to get my certifications, including Cisco CCNA®, and now am on my way to Cisco CCNP®. CSSIA gave me the opportunity to enhance my skills, have an internship, and participate in the Collegiate Cyber Defense Competition. Truly, if it was not for CSSIA at Moraine Valley, I would not be where I am today: employed by SecureWorks, one of the best computer networking security corporations in the country.”

[Ohlone College](#), a two-year institution with campuses in the San Francisco Bay Area communities of Fremont and Newark, has partnered with [Irvington High School](#) in Fremont to create a [Career Pathway in Information and Communications Technology](#). The program provides a smooth transition from high school coursework to the community college IT curricula, and also serves as a pathway to the university level for students who want to pursue a bachelor’s degree in computer science or engineering. Because they adhere to core technical and academic standards, Networking Academy

courses taught at Irvington align closely with courses at Ohlone, leading directly into related associate of science degree programs. Under Ohlone’s direction, several other postsecondary institutions in the region are offering similar programs.

“The strongest connection right now between K–12 and higher education is the community college,” says Richard Grotegut, professor of computer networking and emerging technology at Ohlone. “We’re typically thought of as the vocational, tech-training arm of the educational system, but community colleges also serve as an academic bridge between high school and the universities. In this case, the focus just happens to be information technology.”

In July 2009, Cisco launched a pilot program in Michigan called the [Workforce Retraining Initiative](#) (WRI) that will be available at all 21 community college and university locations where Networking Academy curriculum is offered in the state. Because healthcare is expected to generate a large number of jobs for Michigan residents in the future, the WRI pilot this September includes a new healthcare IT course that focuses on electronic health records (E.H.R) and familiarity with healthcare terminologies. In January 2010, the healthcare curriculum will focus on practice management, E.H.R., telemedicine, mobility, telephony and the use and integration of medical information. In addition to healthcare, the program will also focus on network security and broadband technology training.

“Collaborative technologies will not only drive the next phase of economic growth for our future, but also the need for a uniquely skilled workforce,” says Cisco Chairman and CEO John Chambers. “The Workforce Retraining Initiative will serve an important role by expanding training for well-paid, high-demand technology-based jobs.”

What’s Next?

The case studies described above are just two examples of how Networking Academy education can add value to community college curricula and increase students’ chances of finding employment in a tough economy. Colleges and schools worldwide

are taking advantage of the program to strengthen their course offerings and enlarge the technical talent pool in their communities.

To find out more about how Cisco Networking Academy can help you prepare your students to participate in the economic recovery, visit: www.cisco.com/go/netacad/us/econ

For general information about Cisco Networking Academy in the United States, visit: www.cisco.com/go/netacad/us

Links

- Foote Partners, www.footepartners.com
 - Brookings Institution, *Stimulus for America's Community Colleges*, www.brookings.edu/opinions/2009/0203_community_college_berube.aspx
 - CSSIA, www.cssia.org
 - Moraine Valley Community College, www.morainevalley.edu
 - Ohlone College, www.ohlone.edu
 - Irvington High School, www.fremont.k12.ca.us/irvington/site/default.asp
 - Ohlone College Career Pathways, www.ohlone.edu/instr/cnet/20080901apathwaytoachievement.html
 - Workforce Retraining Initiative, http://newsroom.cisco.com/dlls/2009/prod_071409.html and www.workforcere trainingus.com
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