Cisco Networking Academy: Michigan Profile

Cisco® Networking Academy® is playing a critical role in the U.S. economic recovery by preparing students for the sustainable jobs that government, education and industry all agree will fuel America’s ability to innovate and compete, not just today but in the future. As the focus turns to infrastructure, Networking Academy provides students with critical IT and networking skills to design, build, and maintain the infrastructure highway that both the public and private sector now depend on for sustainability.

The new Obama administration clearly recognizes the importance that technology plays in preparing students to compete in a 21st century global economy. In a speech on January 8, 2009, at Virginia's George Mason University, President Obama highlighted the current science and technology skills gap in the United States and the urgent need to address it:

“To give our children the chance to live out their dreams in a world that’s never been more competitive, we will equip tens of thousands of schools, community colleges, and public universities with 21st century classrooms, labs, and libraries. We’ll provide new computers, new technology, and new training for teachers, so that students in Chicago and Boston can compete with kids in Beijing for the high-tech, high-wage jobs of the future.”

Cisco Networking Academy is a proven model for delivering 21st century learning because it delivers:

- rigorous and interactive curricula licensed at no cost to nonprofit educational institutions
- an e-learning platform that supports different learning styles
- web-based content available to students 24/7
- online assessments
- student performance tracking
- hands-on labs
- instructor training and support

Networking Academy is a unique public-private partnership between educational institutions, national, state and local government, and community-based organizations, currently educating more than 128,000 students in over 2,200 U.S. educational institutions.

As an education solution, Networking Academy encourages seamless educational pathways between secondary and post-secondary institutions by using curricula aligned to national and state education standards for math, language arts, and technology and industry certifications. These courses also help students prepare to pursue degrees related to science, technology, engineering, and math (STEM). Networking Academy courses provide instructors with tools to help students make the connection between their educational experience and their careers. In the United States, academies are located in high schools, technical schools, colleges, universities, and community-based organizations.

Cisco Networking Academy provides:

- IT and networking skills mapped to high-skill, high-demand, high-wage 21st century jobs across virtually every industry
- sustainable partnerships at all levels of education, including community colleges at the forefront of workforce development and retraining
• strong alignment with high school career and technical education programs that build technical skills and create pathways for high school graduates going either directly into the workforce or on to post-secondary education

• the skilled pipeline of talent required to design, build and maintain the infrastructure needed for economic recovery

Included in each state profile are Networking Academy statistics, IT workforce projections, and student/graduate stories. These state-by-state profiles will provide you with important information about the value Cisco brings to government, education and business through delivery of IT/networking skills and knowledge. Cisco Networking Academy educates the architects of today’s networked economy.

Profiles are updated annually with core content, and we will continue to add student/graduate profiles. For your convenience, the library of profiles for each state, plus the District of Columbia and the United States as a whole, are accessible at http://www.cisco.com/go/netacadresourcecenter.

We welcome your suggestions for future profiles. Please send any questions and feedback to our U.S. Marketing Team via Nancy Bischoff at nbischof@cisco.com.

Learn More
Table 1 lists data about academies in Michigan. Table 2 lists information about Networking Academy curricula in Michigan, and Table 3 shows information by student education level.

For additional information about Cisco Networking Academy, visit http://www.cisco.com/go/netacad

Table 1. Cisco Networking Academy in Michigan

| Networking Academy students | 2954 |
| Female Networking Academy students | 12% female |
| Distinct cumulative academy students (having successfully completed a course) | 12,335 |
| Academies | 50 |
| Academy instructors | 75 |
| Total estimated cumulative contribution value to Michigan academies* | $7,194,892 |

Sources: AME/MRE FULL Package_10 31 08 Quarterly Metrics Date: Nov 13, 2008
Cumulative students are distinct; therefore, each student is only counted once.
*This estimate includes donations and discounts made to educational institutions implementing Cisco Networking Academy within Michigan.
*Sources: AME/MRE report #3616student and instructor enrollment by year 2008.11.24_JBZ_v6.xls

Table 2. Networking Academy Curricula in Michigan

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>All</th>
<th>ITE</th>
<th>CCNA 1, 2</th>
<th>CCNA 3, 4</th>
<th>Advanced Technologies and Other*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of academies by curriculum</td>
<td>50</td>
<td>26%</td>
<td>90%</td>
<td>56%</td>
<td>22%</td>
</tr>
</tbody>
</table>

The above curricula represent the core Networking Academy curricula.
*Includes CCNP, Security, Wireless, Java, UNIX and Panduit Network Infrastructure Essentials (PNIE)
Academies often teach multiple curricula and may be counted more than once in this table.
Source: AME/MRE rpt #3651 as of 10.31.08 v2 Date: Dec 8, 2008
Table 3. Michigan Academies and Students by Education Level

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Total Number</th>
<th>Secondary Schools</th>
<th>Community Colleges</th>
<th>Universities</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michigan Students*</td>
<td>2954</td>
<td>47%</td>
<td>31%</td>
<td>19%</td>
<td>3%</td>
</tr>
<tr>
<td>Michigan Academies*</td>
<td>50</td>
<td>54%</td>
<td>20%</td>
<td>22%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Sources: AME/MRE FULL Package 10 31 08 Quarterly Metrics Date: Nov 13, 2008

*For academies that self identify as more than one education level, the academies and students in this table are distributed proportionately across the education levels.

Academies represented in “Other” category include the following: community-based organizations, middle schools, the military, nontraditional educational settings, and post-graduate institutions.
Active Cisco Networking Academies in Michigan

U.S. Congressional District Database

Data for this report was gathered using the U.S. Congressional District Database. This tool was developed to communicate with congressional representatives about Cisco Networking Academy implementation in their home districts. The database maps actively teaching academies by congressional district or by all districts within a state, providing academy name, city, state, and congressional district. The listing by state is updated annually.

Table 4 lists information about academies in Michigan congressional districts.

Table 5. Networking Academies in Michigan Congressional Districts

<table>
<thead>
<tr>
<th>Number of Michigan Congressional Districts</th>
<th>Number of Michigan Congressional Districts with Networking Academies</th>
<th>Number of Michigan Congressional Districts without Networking Academies</th>
<th>% Michigan Congressional District Penetration</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>14</td>
<td>1</td>
<td>93%</td>
</tr>
</tbody>
</table>

Academies listed here have taught a class with at least three students, or adopted a new curriculum, within the last twelve months.

Source: MRE/Academy Connection, U.S. Congressional District Database   Date: October 31, 2008

Active Michigan Cisco Networking Academies by Congressional District

* Indicates Cisco Networking Academy Training Center

Academies listed here have taught a class with at least three students, or adopted a new curriculum, within the last twelve months.

Source: MRE/Academy Connection, U.S. Congressional District Database   Date: October 31, 2008

Congressional District 1
- Inland Lakes Schools (Indian River)

Congressional District 2
- Baker College of Muskegon (Muskegon)
- Mona Shores High School (Norton Shores)
- Newaygo County Intermediate School District (Fremont)

Congressional District 3
- *Davenport University-Western Region - Grand Rapids (Grand Rapids)
- East Kentwood High School (Kentwood)

Congressional District 4
- *Davenport University-Midland (Midland)
- Ferris State University (Big Rapids)
- Midland County ESA (Midland)
- Northwestern Michigan College (Traverse City)

Congressional District 5
- Delta College (University Center)
- Saginaw Career Complex (Saginaw)

Congressional District 6
- Buchanan Community Schools (Buchanan)
- Coloma High School (Coloma)
- Davenport University - Western Region - Kalamazoo (Kalamazoo)
- Lake Michigan College (Benton Harbor)
- Van Buren Technology Center (Lawrence)

Congressional District 7
- Calhoun Area Technology Center (Battle Creek)
- Jackson Community College (Jackson)
- Kellogg Community College (Battle Creek)
- LISD Tech Center (Adrian)
- Washtenaw Community College (Ann Arbor)
Congressional District 8
• Davenport University (Lansing)
• Lansing Community College (Lansing)
• Pinckney Community Schools (Pinckney)

Congressional District 9
• Baker College of Auburn Hills (Auburn Hills)
• Bloomfield Hills Model High School (West Bloomfield)
• Oakland Community College (Farmington Hills)
• Troy Athens High School (Troy)
• West Bloomfield High School (West Bloomfield)

Congressional District 10
• Baker College of Port Huron (Port Huron)
• Lapeer ISD Education and Technology Center (Attica)
• Sanilac I.S.D. (Peck)

Congressional District 11
• Livonia Career/Technical Center (Livonia)
• South Lyon High School (South Lyon)
• Walled Lake Central High School (Commerce Township)

Congressional District 12
• *Davenport University - Eastern Warren (Warren)
• Detroit Electrical Joint Apprenticeship and Training (Warren)
• Macomb Community College (Warren)

Congressional District 14
• A.P. Randolph Career Technical Center (Detroit)
• Baker College - Allen Park (Allen Park)
• Breithaupt Career and Technical Center (Detroit)
• Davenport University - Eastern Region-Dearborn Cam (Dearborn)
• Focus: Hope Information Technologies Center (Detroit)
• Grosse Ile High School (Grosse Ile)
• Hamtramck High School (Hamtramck)
• Southgate Community School District (Southgate)

Congressional District 15
• Annapolis High School (Dearborn Heights)
• *Henry Ford Community College - Regional (Dearborn)
• Michael Berry Career Center (Dearborn Heights)
Cisco Networking Academy: Workforce Development in Michigan

Cisco® Networking Academy® is ready to help U.S. workers learn critical IT and networking skills through academies located in high schools, community colleges, four-year colleges, and nontraditional settings. Developing in-demand technical skills in a timely, focused program enables students to quickly find and retain sustainable, high-paying jobs. Academy courses map to industry certifications and prepare students for technical jobs in a new, improved technical infrastructure across the nation. Even students who complete introductory courses will be prepared to work for companies that depend on a technical infrastructure for business sustainability.

“Obama’s pro-tech agenda could increase the number of technology jobs in the United States by 10 percent, adding about 300,000 high-paying IT positions.” –Katherine McGuire, VP of government relations, Business Software Alliance

“Even with this economic downturn, the jobs outlook in IT for 2009 is better than that of many other industries, since IT is no longer at the peripheral of industries but at the core of their competitive edge, and IT will play a critical role in the infrastructure build out.” –David Foote, CEO of Foote Partners LLC, which analyzes IT wages and hiring data

As the U.S. remains focused on economic recovery throughout 2009, there is a growing emphasis on upgrading the educational infrastructure to deliver the required knowledge and skills to build the needed technical workforce to support and maintain technology infrastructure assets and requirements. Just as the interstate highway investment created millions of construction jobs, which were then followed by maintenance and automotive jobs in the long term, so technology investments will initially create jobs necessary to design and deploy technology infrastructure, and these jobs will be followed by an array of new business opportunities.

“Investments in America’s digital infrastructure will spur significant job creation in the immediate term. An investment of $40 billion in IT network infrastructure in 2009 will create more than 949,000 U.S. jobs, more than half of which will be in small businesses.” –Technology CEO Council press release

Cisco Networking Academy addresses the need for 21st century teaching and learning models that prepare students to move into the pipeline of talent needed to fill these high-skill, high-wage, high-demand careers.

"We will enable students of all ages to learn in 21st century classrooms, labs, and libraries, to help our students compete with any worker in the world.” –American Recovery and Reinvestment Plan press release

In a recent report, the Information Technology and Innovation Foundation “finds that investments in America’s digital infrastructure will spur significant job creation in the short run. Specifically, ITIF estimates that an additional investment of $30 billion in America’s IT network infrastructure in 2009 will create approximately 949,000 U.S. jobs.”

1 Computerworld, 1/5/09, Stimulus could create thousands of IT jobs, http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=331783


### IT Occupational Data

Table 5 lists information about IT-related occupations in the United States, and Table 6 lists this information for Michigan.

#### Table 5. Selected IT-Related Occupations in the United States

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Employment 2006</th>
<th>Employment 2016</th>
<th>Employment Change</th>
<th>Average Annual Openings</th>
<th>Occupational Employment as of May 2007*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Support Specialists</td>
<td>552,000</td>
<td>624,000</td>
<td>71,000</td>
<td>24,000</td>
<td>525,570</td>
</tr>
<tr>
<td>Computer Systems Analysts</td>
<td>504,000</td>
<td>650,000</td>
<td>146,000</td>
<td>28,000</td>
<td>446,440</td>
</tr>
<tr>
<td>Network and Computer Systems Administrators</td>
<td>309,000</td>
<td>393,000</td>
<td>83,000</td>
<td>15,000</td>
<td>309,660</td>
</tr>
<tr>
<td>Network Systems and Data Communications Analysts</td>
<td>262,000</td>
<td>402,000</td>
<td>140,000</td>
<td>19,000</td>
<td>216,050</td>
</tr>
<tr>
<td>Computer and Information Systems Managers</td>
<td>264,000</td>
<td>307,000</td>
<td>43,000</td>
<td>9,000</td>
<td>264,990</td>
</tr>
</tbody>
</table>


#### Table 6. Selected IT-Related Occupations in Michigan

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Support Specialists</td>
<td>15,120</td>
<td>16,630</td>
<td>1510</td>
<td>619</td>
<td>14,210</td>
</tr>
<tr>
<td>Computer Systems Analysts</td>
<td>17,220</td>
<td>20,430</td>
<td>3210</td>
<td>777</td>
<td>16,090</td>
</tr>
<tr>
<td>Network and Computer Systems Administrators</td>
<td>7850</td>
<td>9270</td>
<td>1420</td>
<td>321</td>
<td>7510</td>
</tr>
<tr>
<td>Network Systems and Data Communications Analysts</td>
<td>7300</td>
<td>10,090</td>
<td>2790</td>
<td>428</td>
<td>6040</td>
</tr>
<tr>
<td>Computer and Information Systems Managers</td>
<td>7300</td>
<td>7830</td>
<td>530</td>
<td>170</td>
<td>6490</td>
</tr>
</tbody>
</table>


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Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at [www.cisco.com/go/offices](http://www.cisco.com/go/offices).
Michigan Student and Graduate Profile

Kelly Gheesling never imagined that her career in networking would be launched by a casual conversation in the Cisco section of a book store. Nor did she imagine that conversation would eventually lead to her first professional job as a network engineer. As she was preparing for the Cisco Certified Network Associate (CCNA®) certification test and browsing the bookshelves for additional Cisco resources another customer commented to her, “Funny, you never really see women interested in networking.” Kelly smiled and told him she was preparing for her CCNA exam, and that yes, women could configure routers, too.

A few weeks later, the night before her CCNA certification test, she was back at the book store focused on her subnetting preparation, when the same man approached her and said “I own a streaming media company here locally, and my Internet service provider is looking for a network engineer. I mentioned you to them, and they asked me to pass along their information.” Two weeks after passing the CCNA certification exam, Kelly interviewed for the position and was offered the job on the spot! In her two years there, Kelly progressed from network engineer to customer service manager, managing the team of account managers and giving presentations on the network infrastructure to Fortune 500 Companies … all at the age of 19!

Kelly’s journey began in 1999 when there was a lot of buzz about the new Cisco® Networking Academy® at Henry Ford Community College. Kelly wanted to be a part of the technological revolution and, after reading about the Networking Academy in the college brochure, decided to give it a shot. Driven by pure motivation and a true passion for technology, she set her sights on her goal of completing the one-year program and earning her CCNA certification. At first, the curriculum was a bit intimidating, but as one of only two women in the class, she was determined to prove herself. The course was broken down so that each objective was explored, practiced, and then integrated into real-world scenarios. And the “hands-on” nature of the curriculum and labs enabled her to develop skills instead of simply memorizing theory. Kelly was able to configure, practice, and troubleshoot Cisco equipment, and having experience with real-world network infrastructures was a real asset during her job interview.

Two weeks after passing the CCNA certification exam, Kelly interviewed for the position and was offered the job on the spot! In her two years there, Kelly progressed from network engineer to customer service manager, managing the team of account managers and giving presentations on the network infrastructure to Fortune 500 Companies … all at the age of 19!

In addition to the curriculum, Kelly also acknowledges the “dedicated instructors, eager mentors, and supportive co-workers” she’s met along the way. “They taught me to find the drive within and to always push for more. Early in my career, my employers took a chance on me, based largely on my participation in the Networking Academy. I find this profession is full of exciting, interesting, and brilliant people, many of whom I now call friends.” One of these is her academy instructor, Todd Browning. “He was passionate about the program which made it a better experience for the entire class.” Kelly remains in contact with Todd and others at the academy at Henry Ford Community College and serves on the Networking Academy Advisory Board at the community college along with several other former students.

Kelly was asked to speak at Henry Ford Community College’s Technology Day while she was still enrolled in the academy. State representatives and members of the community, neighboring educational institutions, and city council attended. Kelly
shared her experience and encouraged other colleges and students to participate in the innovative, career-building Networking Academy. Kelly was also invited to speak at the Imagine Your Future Seminar at Henry Ford Community College. This seminar encourages high school girls to explore non-traditional careers for women and Kelly’s presence dispelled stereotypes many girls had about IT professionals.

Kelly often tells people that choosing the Networking Academy was the best decision she’s made for her professional life. “It has been the foundation of my entire career. The experience of being part of this program has opened so many doors for me … for a student with an interest in information technology, attending the Networking Academy is the single best choice for building your education and your career. It truly is a lifelong investment.”

Kelly’s determination, motivation, and focus were important factors in her success in the Networking Academy. She often tells people that choosing the Networking Academy was the best decision she’s made for her professional life. “It has been the foundation of my entire career. The experience of being part of this program has opened so many doors for me … for a student with an interest in information technology, attending the Networking Academy is the single best choice for building your education and your career. It truly is a lifelong investment.”

Kelly’s success has allowed her to live a life of comfort and stability, including purchasing her first home when she was only 22 years old. In retrospect, what Kelly enjoyed most about the Networking Academy was the sense of accomplishment and achievement upon completing it. “Going through an intense, career-building program and seeing the progress you have made, the knowledge you have gained, and the opportunities that lie ahead give an irreplaceable sense of achievement” says Kelly.

For the past seven years, Kelly has been supporting national networks and designing, planning, and managing large-scale, complex network projects. She is expanding her “technological tool belt” and is now working as a UNIX system administrator and project planner at a leading automotive financing company. Her long-term goal is to become vice president of information technology for a major corporation.

“Working in this industry keeps you on your toes, with technology ever-changing and so many avenues to explore. As I make steps forward in my career, I carry with me the knowledge and the solid foundation that the Networking Academy built to strengthen my networking skills and apply those concepts to become proficient in multiple platforms in the IT arena. I love my job and I am forever grateful for all of the doors this program has opened.”

For more information on the academy at Henry Ford Community College, visit: [www.hfcc.edu](http://www.hfcc.edu)