



Cisco Networking Academy: Wisconsin Profile

Educating the Architects of the Networked Economy

Now in its second decade, Cisco® Networking Academy® has provided more than two million students worldwide with the information technology (IT) and networking skills necessary to compete in the 21st century global economy.

To prepare the Networking Academy for the decade ahead, Cisco has launched innovative new curricula including Cisco Certified Network Associate (CCNA®) Discovery and CCNA Exploration, as well as a new version of IT Essentials called PC Hardware and Software, and updates to the Cisco Certified Network Professional (CCNP®) curriculum. These new courses have been specifically designed to help students be more successful, whether they plan to be IT professionals or are simply seeking a deeper understanding of IT.

Our new courses align to industry certifications, including the recently launched Cisco Certified Entry-Level Technician (CCENT™). In addition to serving as an entry-level certification for employers, CCENT helps meet the new Carl D. Perkins Career and Technical Improvement Act funding requirements.

The new Networking Academy curricula provide seamless educational pathways between secondary and post-secondary institutions and are aligned to national and state education standards for math, science, and language arts. These courses can also help students prepare to pursue degrees related to science, technology, engineering, and math (STEM). In the United States, academies are located in high schools, technical schools, colleges, universities, and community-based organizations with more than 125,000 students enrolled at more than 2300 academies.[†]

As IT continues to be a high-demand job field in the United States, many educational institutions are incorporating IT into their offerings:

- Secondary schools are building pathways for students around the IT career cluster.
- Post-secondary institutions are integrating IT curriculum into degree programs ranging from computer science to networking to business.
- Community colleges and technical schools are providing existing workers with the opportunity to upgrade their skills, pursue additional education, and expand their expertise in technical fields.

Through its proven model of public-private partnerships with education, government, and business, Cisco Networking Academy is addressing the growing need for a pipeline of skilled IT professionals at a time when corporate technology leaders, public sector IT officials, and technology-service-oriented industries are concerned about the lack of a trained technical workforce to fill existing jobs.

[†] Source: AME/MRE FULL Package_10 31 07 Quarterly Metrics_v2 Date: November 28, 2007

An academy has a class currently in session or has taught a class, with at least 3 students, within the last 12 months.

A student is enrolled in a class or has taken a class within the last 12 months.

Learn More

Table 1 lists data about academies in Wisconsin. Table 2 lists information about Networking Academy curricula in Wisconsin, 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 Wisconsin

Networking Academy students	2544
Distinct cumulative academy students (having successfully completed a course)	11,782
Academy instructors	74
Total estimated cumulative contribution value to Wisconsin academies*	\$5,581,694

Source: AME/MRE FULL Package_10 31 07 Quarterly Metrics_v2 Date: November 28, 2007

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 Wisconsin.

*Sources: AME/MRE reports 1211_190710.31.07 Date: November 30, 2007

Table 2. Networking Academy Curricula in Wisconsin

Curriculum	CCNA®	CCNP®	IT Essentials	Security	Wireless
Number of academies by curriculum	26	2	11	3	3

The above curricula represent the core Networking Academy curricula. Panduit Network Infrastructure Essentials, Java, and UNIX are also available.

Academies often teach multiple curricula and may be counted more than once in this table.

Source: AME/MRE rpt 3087 Date: December 5, 2007

Table 3. Wisconsin Academies and Students by Education Level

Education Level	Number of Wisconsin Academy Students	Percentage of Wisconsin Students	Number of Wisconsin Networking Academies	Percentage of Wisconsin Academies*
Secondary schools	560	22%	23	68%
Community colleges	1857	73%	10	29%
Universities	153	6%	1	3%
Other	0	0%	0	0%
Total by education level	2544	100%	34	100%

Source: AME/MRE FULL Package_10 31 07 Quarterly Metrics_v2 Date: November 28, 2007

Academies represented in "Other" category include the following: community-based organizations, middle schools, the military, nontraditional educational settings, and post-graduate institutions



Cisco Networking Academy: Workforce Development

If the United States is to remain competitive in this global economy, leading experts believe we must have a trained and educated workforce. And yet the number of U.S. students pursuing careers in science, technology, engineering and math—critical areas for educating the workforce of tomorrow—continues to decline.

Cisco Networking Academy addresses this gap by providing students with the skills needed to succeed in the wide range of careers available today and tomorrow. In addition to integrating IT skills, the Networking Academy also embeds math, science, and language arts skills in the curricula.

IT Occupational Data

Table 4 lists information about IT-related occupations in the United States, and Table 5 lists this information for Wisconsin.

Table 4. Selected IT-Related Occupations in the United States

Occupation	Employment		Employment Change		Average Annual Openings	Occupational Employment as of May 2006*
	2004	2014	Numeric	Percent		
Computer Support Specialists	518,370	637,560	119,190	22	18,300	514,460
Computer Systems Analysts	486,550	639,500	152,960	31	20,800	446,460
Network and Computer Systems Administrators	278,380	385,250	106,870	38	13,770	289,520
Network Systems and Data Communications Analysts	231,270	357,460	126,190	54	15,340	203,710
Computer and Information Systems Managers	280,290	352,920	72,620	25	12,350	251,210

U.S. Department of Labor, Bureau of Labor Statistics, <http://www.bls.gov/oco/oco20024.htm>, based on data availability as of December 2007

*U.S. Department of Labor, Bureau of Labor Statistics, May 2006 State Occupational Employment and Wage Estimates (US), http://stat.bls.gov/oes/current/oes_nat.htm

Table 5. Selected IT-Related Occupations in Wisconsin

Occupation	Employment		Employment Change		Average Annual Openings	Occupational Employment as of May 2006 [^]
	2004	2014	Numeric	Percent		
Computer Support Specialists	8,800	10,440	1,640	18	270	8,150
Computer Systems Analysts	11,280	14,110	2,820	25	410	9,420
Network and Computer Systems Administrators	5,300	7,190	1,890	35	250	5,020
Network Systems and Data Communications Analysts	4,220	6,240	2,020	47	250	4,290
Computer and Information Systems Managers	4,710	5,760	1,050	22	190	4,080

U.S. Department of Labor, Bureau of Labor Statistics, <http://www.bls.gov/oco/oco20024.htm>, based on data availability as of December 2007

[^]U.S. Department of Labor, Bureau of Labor Statistics, May 2006 State Occupational Employment and Wage Estimates (by state), <http://stat.bls.gov/oes/current/oesrcst.htm>



Wisconsin Student and Graduate Profile

With more than 20 years in the telecommunications industry, Mark Kools understands the importance of staying current in technology. Mark's employer, Appleton Papers ("Appleton"), had been a Cisco customer for years so Mark was somewhat familiar with Cisco equipment. But as Manager of Telecommunications he wanted to optimize use of the equipment that was already in place, so he enrolled in the Cisco® Networking Academy® at Fox Valley Technical College and earned his Cisco Certified Network Associate (CCNA®) certification. Mark is now the Director of Information Technology Infrastructure at Appleton. He has been able to directly apply the skills, knowledge and experience he gained through Cisco Networking Academy to successfully fine-tune Appleton's network configurations, increase security, and increase functionality.

When Mark enrolled in the Networking Academy in 2001, he had several reasons. In addition to his desire to enhance his knowledge of networking technologies and Cisco equipment, Mark wanted to gain earn his CCNA certification and help one of his children prepare for college. Mark's oldest son Ryan was a senior in high school at the time and preparing to attend college and major in electrical engineering. Ryan wanted some exposure to networking technologies, so when Mark suggested Cisco networking classes, Ryan agreed, and soon father and son were attending classes together. Mark completed his coursework in 2004 and went on to earn his CCNA certification. By the time Ryan headed off to college, he had finished two-thirds of the curriculum. When asked what it was like going to school with his son, Mark exclaims "It was a lot of fun! We got to spend extra time together, played off each others' strengths, and worked on labs together."

"The need for IT infrastructure will never diminish. There are great career opportunities. You get to work with new technology and there's always something new coming out. If you apply yourself, you can really make the equipment dance, and make it a great experience for your customers."

Mark Kools

Time management was often an issue when Mark was enrolled in the academy. "You get out of the class what you put into it," he says and "I needed to adjust my lifestyle to ensure I had adequate time to prepare for the class and exams." Working full-time at a job where Cisco equipment was being used while at the same time attending Networking Academy classes and labs at night had a synergistic effect. Mark was able to apply what he learned in the labs to enhance the configuration of the network at work. He was pleased to discover that many of his classmates also worked full-time and brought different strengths and ideas to the academy discussions.

The Networking Academy's online format made it easy for Mark to work at his own pace and as time allowed. "As a working adult, this was very important to my success," affirms Mark. "The hands-on labs were a great way for people to learn things and the instructor, Elizabeth Halweg, was always available to assist as needed and help keep the students focused."

In his position as Director of Information Technology Infrastructure for Appleton Papers, Mark has overall responsibility for the enterprise-wide infrastructure. "The Networking Academy helped solidify my knowledge, enabling me to better develop technology plans to meet our strategic objectives," says Mark.



Mark also has some responsibility for professional development, and believing in the value of the CCNA curriculum, has encouraged his team members to enroll in the Networking Academy. A few of them have followed his advice and are currently taking Networking Academy classes and pursuing CCNA certification. “It will be a boost for the company,” says Mark.

When asked what it was like going to school with his son, Mark exclaims “It was a lot of fun! We got to spend extra time together, played off each others’ strengths, and worked on labs together.”

To those who may be interested in the Networking Academy, Mark offers this advice: “It is well worth the investment in time and effort. It is the stepping stone to a career in networking and provides you with a solid understanding of the principles and technologies that support the infrastructure. Get as much knowledge as you can. You can advance your career even more by improving skills and getting additional certifications like CCNP®. The need for IT infrastructure will never diminish. There are great career opportunities. You get to work with new technology and there’s always something new coming out. If you apply yourself, you can really make the equipment dance, and make it a great experience for your customers.”

For information on the Networking Academy at Fox Valley Technical College, go to:

<http://www.fvtc.edu/public/academics/subjectarea.aspx?area=10>



Active Cisco Networking Academies in Wisconsin

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 active 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 6 lists information about academies in Wisconsin congressional districts. Custom reports by congressional districts may be run upon request by contacting Melody Buchanan at Melody.Buchanan@ciscolearning.org.

Table 6. Networking Academies in Wisconsin Congressional Districts

Number of Wisconsin Congressional Districts	Number of Wisconsin Congressional Districts <u>with</u> Networking Academies	Number of Wisconsin Congressional Districts <u>without</u> Networking Academies	% Wisconsin Congressional District Penetration
8	8	0	100%

Academies listed here have taught a class, with at least one student, within the last six months

Source: MRE/Academy Connection, U.S. Congressional District Database Date: January 3, 2008

Active Wisconsin Cisco Networking Academies by Congressional District

* Indicates Cisco Networking Academy Training Center

Academies listed here have taught a class, with at least one student, within the last six months

Source: MRE/Academy Connection, U.S. Congressional District Database Date: December 31, 2007

Congressional District 1

- Badger High School (Lake Geneva)
- *Gateway Technical College-Elkhorn (Elkhorn)
- Gateway Technical College-Kenosha (Kenosha)
- Whitnall High School (Greenfield)

Congressional District 2

- Fort Atkinson High School (Fort Atkinson)
- McFarland School District (McFarland)
- *Madison Area Technical College (Madison)
- Sun Prairie Area School District (Sun Prairie)
- Whitewater High School (Whitewater)
- Wisconsin Heights High School (Mazomanie)

Congressional District 3

- Southwest Wisconsin Technical College (Fennimore)
- Chippewa Valley Technical College (Eau Claire)

- Chippewa Valley Technology Charter School (Eau Claire)
- School District of Lacrosse (La Crosse)
- Sparta Area School District (Sparta)
- *University of Wisconsin - Stout (Menomonie)
- Western Technical College (La Crosse)
- Western Wisconsin Technical College - Mauston Camp (Mauston)

Congressional District 4

- *Milwaukee Area Technical College (Milwaukee)
- St. Francis High School (Milwaukee)

Congressional District 5

- *Waukesha County Technical College (Pewaukee)
- New Berlin School District (New Berlin)
- Wauwatosa East High School (Wauwatosa)

- West Bend School District (West Bend)

Congressional District 6

- Watertown Unified School District (Watertown)
- Wautoma High School (Wautoma)

Congressional District 7

- Abbotsford School District (Abbotsford)
- Ashland High School (Ashland)
- Marshfield Senior High School (Marshfield)
- Medford Area Sr High School (Medford)
- Stevens Point Area Senior High School (Stevens Point)

- Wisconsin Indianhead Technical College (Shell Lake)

Congressional District 8

- Fox Valley Technical College (Appleton)
- Freedom High School (Freedom)
- Hortonville School District (Hortonville)
- Lakeland Union High School (Minocqua)
- Pulaski Community High School (Pulaski)
- West High School (Green Bay)



Cisco Networking Academy: Promoting IT Careers

Technology jobs will not only continue to grow, but the role of information technology (IT) workers will continue to evolve since today nearly every company in every industry relies on IT. The skills learned through Cisco Networking Academy lay a critical foundation for almost any profession, even non-IT careers. Networking Academy graduates not only build careers, but also help build businesses, communities, and countries.

If the United States is to remain competitive and continue to innovate in a global economy, we must foster student interest in pursuing technology- and engineering-related careers. A critical strategy in building a technical workforce for the 21st century is the development of seamless programs like Networking Academy that build pathways between secondary and post-secondary institutions and lead to professional career development.

Through the Cisco Promoting IT Careers initiatives, students are introduced to potential careers in IT and networking and given valuable information about pathways to advanced education, certification, and careers.

Visit the Promoting IT Careers Website, <http://www.cisco.com/go/promoteitcareers>, which is dedicated to the following:

- Increasing awareness and interest in opportunities in IT and networking
- Creating interest in IT and networking as a profession
- Helping students establish career goals
- Providing tools and resources to support success as students pursue IT careers
- Creating opportunities for students and graduates to transition from classroom to careers

Five Ways to Promote IT Careers

The following events and activities engage students at all levels of experience. Valuable tools and resources for each event are available through the Promoting IT Careers Website.

1. Host Your Own All Academy Day

All Academy Day is a competition that gives students the chance to show off the skills they have learned in the Networking Academy and to explore career pathways by interacting with IT professionals. Teams of students participate in a series of hands-on events selected from the following options: cable making, component identification, computer building, home networking, quiz bowl, router configuration, TAC/professionalism, and virtual computers. For more information, visit: <http://www.cisco.com/go/allacademyday>

2. Help Students See Your Shadow

Job shadowing can be an important first step in pointing students toward IT careers. You can put on a full **Job Shadow Day** or offer an event as simple as a guest speaker in your classroom. Hearing first-hand about the world of work from IT professionals helps students relate their classroom experiences to the workplace and can inspire students to pursue careers in math, science, and technology. For more information, visit: <http://www.cisco.com/go/jobshadow>

3. Introduce Young Students to the World of IT

Packetville is a public e-learning portal filled with interactive and educational resources for introducing students aged 8 to 14 to the world of IT. Lesson plans, which are aligned with the standards of the International Society for Technology in Education, include community service projects and career exploration. For more information, visit: <http://www.cisco.com/go/packetville>

4. Connect Students with Employers

The Networking Academy is connecting Networking Academy alumni with employers through the Career Connection job board. For more information, visit: <http://cc.netacad.net/home.do>

5. Explore the Landscape of IT

This series of **Virtual Field Trips** helps Networking Academy students and instructors explore and understand the landscape of IT and prepare for networking careers, all without leaving the classroom. Designed to engage students early on in their Networking Academy experience, the videos cover a range of topics that encourage students to continue their education and begin early to build their career path. A companion module that accompanies each video reinforces the content from the video. For more information, visit: <http://www.cisco.com/go/virtualfieldtrip>

Learn More about IT and Networking Careers

- Certification Magazine, “Hot Jobs & Skills for 2007”
http://www.certmag.com/articles/templates/CM_gen_Article_template.asp?articleid=2521&zoneid=1
- CNNMoney.com, “Skilled Worker Shortage Hurts U.S.”
http://money.cnn.com/2007/01/04/news/economy/jobs_outlook/index.htm
- Job Data Resources
 - U.S. Department of Labor Bureau of Labor Statistics, Occupational Employment Statistics
<http://data.bls.gov/oes/search.jsp>
 - State-Level Job Projections
<http://www.projectionscentral.com>
- John Chambers on the role of technology in education
http://www.forbes.com/opinions/2008/01/23/solutions-education-chambers-oped-cx_sli_0123chambers.html
- “The Quiet Crisis,” Shirley Ann Jackson, Ph.D.; President, Rensselaer Polytechnic Institute
<http://www.rpi.edu/homepage/quietcrisis/>



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