



Cisco Networking Academy: Minnesota 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 Minnesota. Table 2 lists information about Networking Academy curricula in Minnesota, 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 Minnesota

Networking Academy students	2345
Distinct cumulative academy students (having successfully completed a course)	10,962
Academy instructors	63
Total estimated cumulative contribution value to Minnesota academies*	\$8,039,439

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 Minnesota.

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

Table 2. Networking Academy Curricula in Minnesota

Curriculum	CCNA®	CCNP®	IT Essentials	Security	Wireless
Number of academies by curriculum	31	3	18	5	4

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. Minnesota Academies and Students by Education Level

Education Level	Number of Minnesota Academy Students	Percentage of Minnesota Students	Number of Minnesota Networking Academies	Percentage of Minnesota Academies*
Secondary schools	610	26%	21	51%
Community colleges	1712	73%	19	46%
Universities	0	0%	0	0%
Other	23	1%	1	2%
Total by education level	2345	100%	42	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 Minnesota.

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 Minnesota

Occupation	Employment		Employment Change		Average Annual Openings	Occupational Employment as of May 2006 [^]
	2004	2014	Numeric	Percent		
Computer Support Specialists	10,270	12,490	2220	21	350	10,420
Computer Systems Analysts	9000	11,800	2790	31	380	8940
Network and Computer Systems Administrators	6080	8220	2140	35	280	8580
Network Systems and Data Communications Analysts	4830	7370	2550	52	310	5140
Computer and Information Systems Managers	8310	10,360	2050	24	360	8650

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>



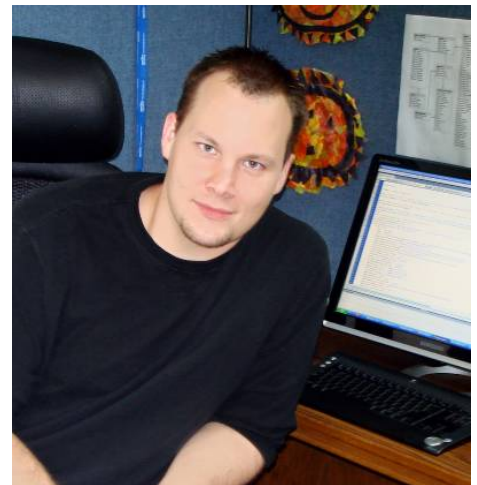
Minnesota Student and Graduate Profile

In 2001, Todd Hamilton was a single parent to two children, working full time, and attending college. Although it was a difficult time for him and his family, Todd persevered and graduated from the Cisco® Networking Academy® at Minnesota State and Technical College (MSTC) in Fergus Falls, Minnesota in 2003. Today, Todd is working full time at Communicating for America Education Programs, LLC as a Webmaster, continuing his studies in computer programming, and pursuing his dream of working in the technology industry. “The Networking Academy was a perfect choice for me. It really exposed a side of computer technology I had never seen and gave me a clear view of how big the world really is.”

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According to Todd, he has always had a strong interest in technology. He remembers being eight years old and working on his first computer. “I believe it was a Macintosh Plus. I fell in love with computers and, at that point, I knew what I wanted to do for the rest of my life.” Todd remembers telling his mother at the age of ten that he wanted to be a computer programmer. Throughout high school, Todd became more interested in pursuing a path in technology, and once he enrolled at Minnesota State and Technical College in 2001 he began the Networking Academy’s Cisco Certified Network Associate (CCNA®) course.



“The Networking Academy labs were great for hands-on learning, my instructors had excellent understanding of the applied technologies, and the content was detailed and easy to understand.” During Todd’s third semester, he faced a few challenges. “I became a single parent to a one- and a three-year-old. This was a very difficult and emotional time for me and working to make ends meet made it very difficult to focus on my studies.” Todd’s determination, patience, and desire to learn led him to success. He accepted an internship with a local company where he helped design and set up the company’s network, and by 2003 he had completed his Networking Academy coursework.

In his current position as a Webmaster, Todd’s responsibilities consist of server and network management and administration, computer programming, and hardware management. “The Networking Academy gave me a very clear vision of the entire process of computer communication, which I have used in wide spectrum of computer technologies, such as building online management applications, management of computer networks and operating systems, and even buying new hardware.”

Todd continues to build upon that vision. In September of 2007, he returned to MSTC to continue his studies in computer networking and programming.

For more information on the Networking Academy at Minnesota State and Technical College-Fergus Falls, visit:
http://www.minnesota.edu/campuses/fergus_falls/



Active Cisco Networking Academies in Minnesota

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 6 lists information about academies in Minnesota 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 Minnesota Congressional Districts

Number of Minnesota Congressional Districts	Number of Minnesota Congressional Districts <u>with</u> Networking Academies	Number of Minnesota Congressional Districts <u>without</u> Networking Academies	% Minnesota 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 Minnesota 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

- Minnesota State College - Southeast Technical (Winona)
- Riverland Community College (Albert Lea)
- Rochester Community and Technical College (Rochester)
- South Central Technical College (North Mankato)

Congressional District 2

- *Inver Hills Community College (Inver Grove Heights)
- Carver Scott Educational Cooperative (Chaska)
- ISD 917 (Rosemount)
- Rosemount High School (Rosemount)

Congressional District 3

- *Anoka-Ramsey CC - CR/Camb (Coon Rapids)

- Hennepin Technical College (Eden Prairie)
- Hopkins High School (Minnetonka)
- Wayzata Public Schools (Plymouth)

Congressional District 4

- Arlington High School (Saint Paul)
- Century College (White Bear Lake)
- East Metro OIC (Saint Paul)
- Mounds View High School (Arden Hills)

Congressional District 5

- Minnesota Statewide Limited Energy JATC (Fridley)

Congressional District 6

- Buffalo (Buffalo)
- Wright Technical Center (Buffalo)
- St. Cloud Apollo (Saint Cloud)

- *St. Cloud Technical College (Saint Cloud)

Congressional District 7

- Alexandria Technical College (Alexandria)
- Canby Public Schools (Canby)
- Crookston Schools (Crookston)
- Lake Park/Audubon High School (Lake Park)
- Fergus Falls Community College (Fergus Falls)
- Frazee High School (Frazee)
- Hawley High School (Hawley)
- *Lakes Country Service Cooperative (Fergus Falls)
- Marshall Public Schools (Marshall)
- Minnesota State Community and Technical College (Detroit Lakes)
- Minnesota State Community and Technical College - (Moorhead)

- Northland Community & Technical College (Thief River Falls)
- Northland Community and Technical College - East G (East Grand Forks)
- Red Rock Central (Lamberton)
- Ridgewater College (Willmar)
- Ridgewater College (Hutchinson)

Congressional District 8

- Albrook High School (Saginaw)
- Cambridge-Isanti High School (Cambridge)
- Cook High School (Cook)
- Hibbing Community College (Hibbing)
- Minnesota State Community and Technical College - (Wadena)



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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