



Cisco Networking Academy: Missouri 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 math, engineering, technology, and science (METS). 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 Missouri. Table 2 lists information about Networking Academy curricula in Missouri, 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 Missouri

Networking Academy students	2494
Distinct cumulative academy students (having successfully completed a course)	8158
Academy instructors	89
Total estimated cumulative contribution value to Missouri academies*	\$4,665,354

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 Missouri.

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

Table 2. Networking Academy Curricula in Missouri

Curriculum	CCNA®	CCNP®	IT Essentials	Security	Wireless
Number of academies by curriculum	42	4	28	4	2

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. Missouri Academies and Students by Education Level

Education Level	Number of Missouri Academy Students	Percentage of Missouri Students	Number of Missouri Networking Academies	Percentage of Missouri Academies*
Secondary schools	1222	49%	37	70%
Community colleges	1047	42%	12	23%
Universities	200	8%	3	6%
Other	25	1%	1	1%
Total by education level	2494	100%	53	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 Missouri.

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 Missouri

Occupation	Employment		Employment Change		Average Annual Openings	Occupational Employment as of May 2006 [^]
	2004	2014	Numeric	Percent		
Computer Support Specialists	9070	10,270	1200	13	230	9720
Computer Systems Analysts	9900	11,790	1900	19	300	9500
Network and Computer Systems Administrators	6170	8110	1930	31	260	8050
Network Systems and Data Communications Analysts	5550	7970	2430	43	310	4430
Computer and Information Systems Managers	5240	6240	1000	19	200	4970

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/oesrcrst.htm>



Missouri Student and Graduate Profile

At just 18 years old, Kinzie Doll is already well on her way to building a successful career in Information Technology (IT). Her journey in networking began in 2005 when, as a junior at the Summit Technology Academy (STA) in Lee's Summit, Missouri, Kinzie decided to enroll in the Cisco® Networking Academy®. Since then, Kinzie has not only competed and won at local and state technology competitions but also became the first female to receive a computer certification at STA.

After graduating high school, Kinzie was hired as a technology assistant with the Liberty Public School district. "The best part about the Networking Academy is the opportunities that you are given inside the course work, in your future education, and in your career," she says.

Kinzie became the first female contestant to represent Missouri in the Internetworking category at the National SkillsUSA Championships, where she placed in the top five.

Kinzie recalls first becoming interested in technology and computers during the seventh grade, but it wasn't until high school that she was introduced to networking. She successfully completed the Cisco IT Essentials curriculum her junior year and was the first female student at STA to earn her CompTIA A+ and I-Net+ certifications. Near the end of her junior year, Kinzie pursued and obtained a summer internship at the Liberty Public School District. The technology director was so impressed with her that he invited her to continue the internship and asked her to consider a full-time position in the future.

As a student Kinzie won multiple awards at the SkillsUSA competitions. During her senior year, she placed second in the district Internetworking competition, which qualified her for the Missouri State SkillsUSA Championship where she took home the first place prize. Kinzie then went on to become the first female contestant to represent Missouri in the Internetworking category at the National SkillsUSA Championships, where she placed in the top five.

Kinzie's honors continue beyond SkillsUSA. In 2007, she became one of only a handful of high school students to receive a Cisco Networking Academy 4R Recognition Award. Additionally, she was named "Senior of the Year" at her high school.

Lisa Oyler, Networking Academy instructor at STA says, "Kinzie has gone above and beyond in taking advantage of what the Networking Academy has to offer. Although she has been offered full-time employment, her future plans include completing her four-year degree."

Through a partnership between STA and Metropolitan Community College (MCC), Kinzie earned 34 dual-credit hours during her junior and senior years in high school. She put these credits and an MCC scholarship to use when she enrolled at MCC in August 2007 to pursue an associate degree in science.



Through a partnership between Summit Technology Academy and Metropolitan Community College, Kinzie earned 34 dual-credit hours during her junior and senior years in high school.

Kinzie has since earned her Cisco Certified Network Associate (CCNA®) certification and continues to work for Liberty Public Schools, helping staff with computer maintenance, assisting teachers in the classroom, and addressing additional computer

projects as they arise. In July 2008, she plans to continue her education by attending DeVry University in Kansas City, Missouri where she intends to apply her MCC credits toward a bachelor's degree in networking and communications management. Kinzie also plans to add the Cisco Certified Network Professional (CCNP®) to her growing list of certifications.

For more information on the academy at Summit Technology Academy, visit: <http://www.leesummit.k12.mo.us/sta/>



Active Cisco Networking Academies in Missouri

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 Missouri 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 Missouri Congressional Districts

Number of Missouri Congressional Districts	Number of Missouri Congressional Districts <u>with</u> Networking Academies	Number of Missouri Congressional Districts <u>without</u> Networking Academies	% Missouri Congressional District Penetration
9	8	1	89%

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 Missouri 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

- Hazelwood Central Senior High School (Florissant)
- Chaminade College Preparatory School (Saint Louis)
- Clyde C. Miller Career Academy (Saint Louis)
- Hazelwood East Senior High School (Saint Louis)
- Hazelwood West Senior High School (Hazelwood)
- McCluer High School (Florissant)
- North County Technical School (Florissant)
- Ranken Technical College (Saint Louis)
- *St. Louis Community College At Forest Park (Saint Louis)

Congressional District 2

- Parkway South High School (Ballwin)
- Parkway West High School (Ballwin)
- South County Technical School (Saint Louis)

- St. Charles Community College (Saint Peters)

Congressional District 4

- *Central Missouri State University (Warrensburg)
- Clinton Technical School (Clinton)
- Nichols Career Center (Jefferson City)
- Saline County Career Center (Marshall)
- State Fair Community College (Sedalia)
- Waynesville Technical Academy (Waynesville)

Congressional District 5

- Dubois Learning Center, Inc (Kansas City)
- Herndon Career Center (Raytown)
- Westport High School (Kansas City)
- *Metropolitan Community College (Kansas City)
- Northeast High School (KCMO Dist) (Kansas City)

- Paseo Academy (KCMO Dist) (Kansas City)
- Southeast High (KCMO Dist) (Kansas City)
- Summit Technology Academy (Lees Summit)
- Vanhorn High School - KCMO School District (Independence)

Congressional District 6

- Brookfield Area Career Center (Brookfield)
- Fort Osage Career and Technology Center (Independence)
- Excelsior Springs Area Career Center (Excelsior Springs)
- Northwest Missouri State (Maryville)

Congressional District 7

- Crowder College (Neosho)
- Gibson Technical (Reeds Spring)

Congressional District 8

- Arcadia Valley Career and Technology Center (Ironton)

- Cape Girardeau Career and Technology Center (Cape Girardeau)
- Current River AVTS - Doniphan R1 (Doniphan)
- Kennett Career & Technology Center (Kennett)
- Mineral Area College (Desloge)
- Pemiscot County Vocational School (Hayti)
- Perryville Area Career & Technology Center (Perryville)
- *SE Missouri State University (Cape Girardeau)
- Unitec Career Center (Bonne Terre)

Congressional District 9

- Columbia Public Schools (Columbia)
- East Central Community College (Union)
- Kirksville R-III School District (Kirksville)
- *Linn State Technical College (Linn)
- Moberly Area Community College (Moberly)



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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