



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

Networking Academy students	2780
Distinct cumulative academy students (having successfully completed a course)	9959
Academy instructors	94
Total estimated cumulative contribution value to Kentucky academies*	\$6,518,882

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 Kentucky.

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

Table 2. Networking Academy Curricula in Kentucky

Curriculum	CCNA®	CCNP®	IT Essentials	Security	Wireless
Number of academies by curriculum	59	0	30	1	0

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. Kentucky Academies and Students by Education Level

Education Level	Number of Kentucky Academy Students	Percentage of Kentucky Students	Number of Kentucky Networking Academies	Percentage of Kentucky Academies*
Secondary schools	1946	70%	53	73%
Community colleges	806	29%	19	26%
Universities	0	0%	1	1%
Other	0	0%	0	0%
Total by education level	2780	100%	72	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 Kentucky.

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 Kentucky

Occupation	Employment		Employment Change		Average Annual Openings	Occupational Employment as of May 2006^
	2004	2014	Numeric	Percent		
Computer Support Specialists	5500	6660	1160	21	180	4980
Computer Systems Analysts	4210	5140	940	22	140	3820
Network and Computer Systems Administrators	2850	3990	1140	39	150	2630
Network Systems and Data Communications Analysts	2650	3960	1320	49	160	2190
Computer and Information Systems Managers	2610	3200	590	22	110	2260

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/oeskrst.htm>



Kentucky Student and Graduate Profile

Dana Brown is a pragmatic person, so when she was suddenly faced with the need to support her three children single-handedly, she began looking around for a quick way to pick up some marketable skills. She had heard from a good friend that networking skills were in demand, so when she discovered the Cisco® Networking Academy® at West Kentucky Community and Technical College (WKCTC) in Paducah, she enrolled in the network administration track.

Dana soon graduated with her associate's degree in applied science and her Cisco Certified Network Associate (CCNA®) and Microsoft Certified Systems Engineer (MCSE) certifications. She is now an instructor in the Computer Information Technology Department at Bluegrass Community and Technical College in Lexington, Kentucky.

Dana already held a bachelor's degree in molecular biology so she was used to challenge academically but had no prior information technology (IT) background. Despite her lack of experience, Dana saw the network administration track as a personal challenge and forged ahead knowing that the skills she acquired would serve her well in building a career in IT and networking.

When she first started in the academy, Dana wasn't sure she would be able to complete it. She felt the pressure of being one of the few women enrolled in the academy, and she shares, "I was terrified of the equipment and didn't know anything about cabling or running things through walls." She attributes her success at the academy to instructors John Vos and Mike Stewart. "I had fabulous teachers who knew what they were doing and knew how to teach it—a rare combination. And both were challenging and helpful and made my experience a great one," says Dana. She also enjoyed the well-equipped labs that gave her the opportunity to work with real equipment and learn skills she would need in the real world. But overall, she gives credit to John and Mike who "encouraged me and made me feel I could do it as well as the guys ... or better." Their encouragement also helped Dana manage her hectic life, which at the time, included attending school full-time, raising three teenagers, and working 12-hour shifts on the weekend in the IT department at a local tire plant. But Dana rose to the challenge and even scored a 987 out of 1000 on her CCNA certification exam.

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Dana is currently an assistant professor at Bluegrass Community and Technical College at Lexington and teaches the Networking Academy curriculum and other information technology-related classes. Despite growing up in a family of teachers, Dana did not think she would ever work in the same profession. So it came as a surprise when her love of technology converged with seemingly innate teaching abilities. Dana is now confident that her networking and teaching experience and certifications will enable her to find work anywhere she lives.

Dana's advice to others who may be interested in the Networking Academy is "Do it. Get help if it gets hard. But once you've got the skills, you've got them forever." As someone who gets bored easily, Dana likes the fact that information technology is a constantly changing field that will give her plenty of opportunities to learn and teach new things.

In retrospect, Dana says "I can't imagine what I could have done that would have turned out better. I now have skills that will serve me well. I don't think you could find anything better" Dana adds, "and I feel fortunate that the program and professors were there."

Dana is now confident that her networking and teaching experience and certifications will enable her to find work anywhere she lives.

Now that her children are grown, Dana is able to indulge her new-found passion for teaching and technology. “I do it because I love it,” says Dana. When she is not at work, Dana spends time with her family, plays with her home network, consults with local businesses, and participates in professional development activities.

For more information on the Networking Academy at West Kentucky Community and Technical College go to:

<http://business.westkentucky.kctcs.edu/it/>

For more information on the Networking Academy at Bluegrass Community and Technical College in Lexington, visit:

<http://www.bluegrass.kctcs.edu/csis/cit/>



Active Cisco Networking Academies in Kentucky

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 Kentucky 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 Kentucky Congressional Districts

Number of Kentucky Congressional Districts	Number of Kentucky Congressional Districts <u>with</u> Networking Academies	Number of Kentucky Congressional Districts <u>without</u> Networking Academies	% Kentucky Congressional District Penetration
7	7	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 Kentucky 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

- Butler County High School (Morgantown)
- Henderson County Technology Center (Henderson)
- Marshall County Technical Center (Benton)
- Metcalfe County High School (Edmonton)
- Murray High School (Murray)
- Paducah Area Technology Center (Paducah)
- Russellville Area Technology Center (Russellville)
- *West Kentucky Community and Technical College (Paducah)

Congressional District 2

- Apollo High School (Owensboro)
- Barren County Area Training Center (Glasgow)
- *Bowling Green Technical College (Bowling Green)

- Bowling Green Technical College-Kati (Bowling Green)
- Campbellsville University (Campbellsville)
- Central Hardin High School (Cecilia)
- DODEA/ USA - Fort Knox High School (Fort Knox)
- *Elizabethtown Community and Technical College (Elizabethtown)
- Grayson County Technology Center (Leitchfield)
- Greenwood High School (Bowling Green)
- Marion County Area Technology Center (Lebanon)
- Nelson County Area Technology Center (Bardstown)
- Shelby County Area Technology Center (Shelbyville)

Congressional District 3

- *Jefferson Community and Technical College (Louisville)
- Trinity High School (Louisville)

Congressional District 4

- *Ashland Community and Technical College (Ashland)
- C. E. McCormick Area Technology Center (Alexandria)
- Carter County Career and Technical Center (Olive Hill)
- Fleming County High School (Flemingsburg)
- *Gateway Community and Technical College (Highland Heights)
- Paul G. Blazer High School (Ashland)
- Russell Area Technology Center (Russell)

Congressional District 5

- Bell ATC Cisco Academy (Pineville)
- Bell County High School (Pineville)
- Cawood High School Local Cisco Academy (Harlan)
- East Ridge High - Pike County (Lick Creek)
- Evarts High School (Evarts)
- *Hazard Community and Technical College (Hazard)
- Knott County ATC (Hindman)
- Knox County Area Technology Center (Barbourville)
- Leslie County ATC (Hyden)

- Magoffin County High School (Salyersville)
- Mayo Technical College (Paintsville)
- Morgan County ATC (West Liberty)
- Pikeville High School-Pikeville Independent (Pikeville)
- *Somerset Community College (Somerset)
- *Southeast Community and Technical College At Cumbe (Cumberland)
- Wayne County Schools (Monticello)
- Whitley County High School (Williamsburg)

Congressional District 6

- Kentucky State University (Frankfort)
- Montgomery County Area Technology Center (Mt. Sterling)
- Franklin County Career and Technical Center (Frankfort)
- Harrodsburg Area Technology Center (Harrodsburg)
- Jessamine Career and Technology Center (Nicholasville)
- Lincoln County ATC (Stanford)
- Powell County High School (Stanton)
- *Bluegrass Community and Technical College (Lexington)
- Scott County Schools (Georgetown)

Congressional District 7

- DODEA/ USA - Fort Campbell High School (Fort Campbell)



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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