



## Cisco Networking Academy: Tennessee 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.<sup>†</sup>

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.

<sup>†</sup> 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 Tennessee. Table 2 lists information about Networking Academy curricula in Tennessee, 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 Tennessee

<b>Networking Academy students</b>	935
<b>Distinct cumulative academy students (having successfully completed a course)</b>	2976
<b>Academy instructors</b>	38
<b>Total estimated cumulative contribution value to Tennessee academies*</b>	\$2,054,275

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 Tennessee.

\*Sources: AME/MRE reports 1210\_190810.31.07 Date: November 30, 2007

**Table 2.** Networking Academy Curricula in Tennessee

<b>Curriculum</b>	<b>CCNA®</b>	<b>CCNP®</b>	<b>IT Essentials</b>	<b>Security</b>	<b>Wireless</b>
<b>Number of academies by curriculum</b>	32	1	8	1	1

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.** Tennessee Academies and Students by Education Level

<b>Education Level</b>	<b>Number of Tennessee Academy Students</b>	<b>Percentage of Tennessee Students</b>	<b>Number of Tennessee Networking Academies</b>	<b>Percentage of Tennessee Academies*</b>
<b>Secondary schools</b>	458	49%	23	61%
<b>Community colleges</b>	458	49%	13	34%
<b>Universities</b>	19	2%	1	3%
<b>Other</b>	9	1%	1	3%
<b>Total by education level</b>	935	100%	37	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 Tennessee.

**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](http://stat.bls.gov/oes/current/oes_nat.htm)

**Table 5.** Selected IT-Related Occupations in Tennessee

Occupation	Employment		Employment Change		Average Annual Openings	Occupational Employment as of May 2006 <sup>^</sup>
	2004	2014	Numeric	Percent		
Computer Support Specialists	8,260	10,210	1,950	23	300	8,280
Computer Systems Analysts	6,720	9,120	2,400	35	320	5,490
Network and Computer Systems Administrators	3,870	5,650	1,780	45	220	4,480
Network Systems and Data Communications Analysts	2,680	4,410	1,720	64	200	2,310
Computer and Information Systems Managers	5,260	6,850	1,590	30	250	4,830

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

<sup>^</sup>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>





## Tennessee Student and Graduate Profile

Betty DeSeck had 17 years of experience in the banking industry when she decided to return to school. She had been working for First Tennessee Bank in Memphis since 1986, first as a teller, then as an ATM specialist, and ultimately as a help desk agent through IBM. In 2003, her contract was ending and Betty knew it was time to pursue something new. “Being a 40-year-old female without a degree made the prospect of finding comparable employment seem pretty grim,” Betty recalls. Since IBM monitored the bank’s network and provided desktop support, this pointed Betty in the direction of a technology degree, and she enrolled in the IT generalist degree program at Southwest Tennessee Community College (STCC) in Memphis, Tennessee.

Betty signed up for the Cisco® Certified Network Associate (CCNA®) course to fulfill a degree requirement, and became a Cisco enthusiast during the first semester. In her words, “The course challenged me and brought me over a learning curve I had never experienced. The way the content was written and labs were taught made me think in a different way.”

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**“The Cisco Networking Academy measures not what you’ve read, but what you understand and can do. It builds conceptual and technical understanding. When you’re taught how to do something, it’s a deeper learning experience and it produces consistent performance.”**

### Betty DeSeck

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After Betty experienced learning “the Cisco way,” she was hooked. “The Cisco Networking Academy® measures not what you’ve read, but what you understand and can do,” Betty explains. “It builds conceptual and technical understanding. When you’re taught how to do something, it’s a deeper learning experience and it produces consistent performance.”

Shortly after returning to school, Betty was offered a position as an enterprise technologist III at First Tennessee Bank, which had become First Horizon National. She moved into the enterprise technology division of the bank, monitoring their ATM, server, switch, and router environments, while attending school. “I finished all of my degree-required classes in December 2005,” Betty recalls, “but I wanted to complete the Networking Academy courses, and did so in May 2006.” The additional work allowed Betty to earn an IT communications degree rather than an IT generalist degree. She obtained her CCNA certification in April 2006 and graduated summa cum laude the following month.



Betty has recently taken on additional responsibilities which allow her to apply her CCNA networking knowledge in a LAN environment and provide second-level desktop and application support to more than 500 users at the check processing center. She has also been tasked with providing remote support for the bank’s switches state-wide. “Although my title stayed the same, I earned a raise and an opportunity to broaden my skill set,” says Betty. She plans to enroll in the Cisco Certified Network Professional (CCNP®) classes to expand her certifications.

“Having met the Cisco challenge is a source of encouragement for me,” adds Betty. “I’m a mother of three who finally completed college. There is no stopping point now. I am not limited. I can do anything.” Betty recently completed her Networking Academy instructor training and is teaching in the continuing education program at Southwest Tennessee Community College.

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**“The course challenged me and brought me over a learning curve I had never experienced. The way the content was written and labs were taught made me think in a different way.”**

**Betty DeSeck**

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To learn more about the Networking Academy at Southwest Tennessee Community College, visit [www.southwest.tn.edu](http://www.southwest.tn.edu)



## Active Cisco Networking Academies in Tennessee

### 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 Tennessee congressional districts. Custom reports by congressional districts may be run upon request by contacting Melody Buchanan at [Melody.Buchanan@ciscolearning.org](mailto:Melody.Buchanan@ciscolearning.org).

**Table 6.** Networking Academies in Tennessee Congressional Districts

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

- Dobyns-Bennett High School (Kingsport)
- East TN State University (Johnson City)
- Sevier County High School (Sevierville)
- \*Walters State College (Morristown)
- WSCC-Credit (Morristown)

#### Congressional District 2

- \*National Joint Apprenticeship Training Committee (Alcoa)

#### Congressional District 3

- Chattanooga State Technical Community College (Chattanooga)
- Sequoyah Technology Center (Soddy Daisy)

#### Congressional District 4

- Fairview High School (Fairview)

**Congressional District 5**

- \*Nashville State Technical Community College (Nashville)

**Congressional District 7**

- Brentwood High School (Brentwood)
- Independence High School (Thompsons Station)
- Riverside High School (Decaturville)
- Tennessee Technology Center at Jackson-Lexington (Lexington)
- Tennessee Technology Center at Crump (Crump)

**Congressional District 8**

- Brighton High School (Brighton)
- Covington High School (Covington)
- Crockett County High School (Alamo)
- Dyer County High School (Newbern)
- Dyersburg High School (Dyersburg)
- \*Dyersburg State Community College (Dyersburg)
- Haywood High Career and Technical (Brownsville)
- Humboldt High School TN (Humboldt)
- \*Jackson State Community College (Jackson)
- Munford High School (Munford)
- Tennessee Technology Center at Jackson (Jackson)
- Tennessee Technology Center at McKenzie (McKenzie)

**Congressional District 9**

- \*Southwest Tennessee Community College (Memphis)
- Southwest Tennessee Community College (Credit Program) (Memphis)
- Tennessee Technology Center at Memphis (Memphis)



## 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](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](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](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/>



**Americas Headquarters**  
Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA  
[www.cisco.com](http://www.cisco.com)  
Tel: 408 526-4000  
800 553-NETS (6387)  
Fax: 408 527-0883

**Asia Pacific Headquarters**  
Cisco Systems (USA) Pte. Ltd.  
168 Robinson Road  
#28-01 Capital Tower  
Singapore 068912  
[www.cisco.com](http://www.cisco.com)  
Tel: +65 6317 7777  
Fax: +65 6317 7799

**Europe Headquarters**  
Cisco Systems International BV  
Haarlerbergpark  
Haarlerbergweg 13-19  
1101 CH Amsterdam  
The Netherlands  
[www-europe.cisco.com](http://www-europe.cisco.com)  
Tel: +31 0 800 020 0791  
Fax: +31 0 20 357 1100

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