



## Cisco Networking Academy: New York 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 New York. Table 2 lists information about Networking Academy curricula in New York, 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 New York

<b>Networking Academy students</b>	8402
<b>Distinct cumulative academy students (having successfully completed a course)</b>	25,934
<b>Academy instructors</b>	246
<b>Total estimated cumulative contribution value to New York academies*</b>	\$15,340,427

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 New York.

\*Sources: AME/MRE reports 1209\_190910.31.07 Date: November 30, 2007

**Table 2.** Networking Academy Curricula in New York

<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>	125	6	54	5	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.** New York Academies and Students by Education Level

<b>Education Level</b>	<b>Number of New York Academy Students</b>	<b>Percentage of New York Students</b>	<b>Number of New York Networking Academies</b>	<b>Percentage of New York Academies*</b>
<b>Secondary schools</b>	5209	62%	105	72%
<b>Community colleges</b>	1512	18%	19	13%
<b>Universities</b>	1597	19%	19	13%
<b>Other</b>	84	1%	3	2%
<b>Total by education level</b>	8402	100%	146	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 New York.

**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 New York

Occupation	Employment		Employment Change		Average Annual Openings	Occupational Employment as of May 2006 <sup>^</sup>
	2004	2014	Numeric	Percent		
Computer Support Specialists	31,000	36,040	5040	16	890	32,890
Computer Systems Analysts	28,700	34,920	6210	21	950	28,480
Network and Computer Systems Administrators	16,590	21,720	5130	30	700	17,420
Network Systems and Data Communications Analysts	14,290	20,640	6360	44	800	14,260
Computer and Information Systems Managers	18,460	21,770	3310	17	670	18,580

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>





## New York Student and Graduate Profile

Sara Howe is “living a dream.” After taking the Cisco® Networking Academy® Cisco Certified Network Associate (CCNA®) course at Erie 1 BOCES in Buffalo, she received a full scholarship to complete her bachelor’s degree in telecommunications at State University of New York (SUNY) Institute of Technology. She is now pursuing her master’s degree at SUNY while working in Manhattan as an information technology (IT) design engineer at a technical consulting firm. “I love what I do. You never get bored.”

Growing up with two older brothers, one of whom works as an engineer, Sara always wanted to “be like them.” In 2002, while attending high school, she began taking courses in the Networking Academy through a vocational technology program at BOCES where her mother worked. Sara was one of only a few females to take the course, and she says she formed friendships with her classmates that continue to be strong today. “We were all there for the same reason: we wanted to learn the latest technology.” Sara says being able to dedicate two and one-half hours each day to a single course helped her absorb the Networking Academy material and laid a foundation of knowledge that has benefited her ever since.

While in high school, Sara participated in the Vocational Industries Club of America (VICA) regional and state competitions and won a gold medal in the Internetworking contest. In addition, she took on an internship at the BOCES administrative center where she had the opportunity to shadow the IT director in the data center.

Sara graduated high school in 2003 and in that same year accepted a full scholarship to study fiber optics at SUNY. By 2007 she had completed her bachelor’s degree in telecommunications and, after working as a summer intern at AKF Technologies, was hired by the company full time as a design engineer.




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**“In my line of work, I often have to design to Cisco standards, which makes my knowledge from the Networking Academy valuable to my employer.”**

**Sara Howe**

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“I mostly design IT/security/audiovisual systems for our clients as well as put together the specifications to go with the drawings and proposals,” Sara explains. “This requires coordination with all disciplines within our office and compliance with our clients’ wishes. In addition, I’m involved in the interviewing process for staffing our other five offices.” Sara says every day she applies what she learned in the Networking Academy to her current role. “In my line of work, I often have to design to Cisco standards, which makes my knowledge from the Networking Academy valuable to my employer.”

Sara’s next goal is to complete her master’s degree in telecommunications. She also hopes to own her own technology consulting firm.

For more information on the Networking Academy at Erie 1 BOCES, visit: [www.eboces.wnyric.org](http://www.eboces.wnyric.org)





## Active Cisco Networking Academies in New York

### 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 New York 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 New York Congressional Districts

Number of New York Congressional Districts	Number of New York Congressional Districts <u>with</u> Networking Academies	Number of New York Congressional Districts <u>without</u> Networking Academies	% New York Congressional District Penetration
29	28	1	97%

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 New York 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

- William Floyd School District (Mastic Beach)
- Patchogue Medford High School (Medford)
- Smithtown Central Schools (Smithtown)
- \*Suffolk County Community College - Regional (Selden)
- Ward Melville High School (East Setauket)
- Westhampton Beach Cisco Academy (Westhampton Beach)

#### Congressional District 2

- East Islip HS (Islip Terrace)
- Eastern Suffolk BOCES (Oakdale)
- JATC Local 25 IBEW Cisco Academy (Hauppauge)
- \*Sayville High School (West Sayville)

- Suffolk County Community College - Western Campus (Brentwood)
- \*SUNY Farmingdale Regional/Local (Farmingdale)
- Walter G. O'Connell High School /Copiague High Sch (Copiague)
- \*Western Suffolk BOCES - Regional (Dix Hills)

#### Congressional District 3

- Bethpage HS (Bethpage)
- North Babylon High School (North Babylon)
- Oyster Bay High School (Oyster Bay)
- Plainedge High School (Massapequa)
- West Islip (West Islip)

#### Congressional District 4

- G.W. Hewlett High School (Hewlett)

### **Congressional District 6**

- St. John's University (Jamaica)

### **Congressional District 7**

- Christopher Columbus HS (Bronx)
- Herbert Lehman High School (Bronx)

### **Congressional District 8**

- \*Chelsea CTE High School (New York)
- \*NYCDOE CATC (New York)
- Stuyvesant High School (New York)
- Touro College (New York)
- William E Grady Technical H.S. (Brooklyn)

### **Congressional District 9**

- Educational and Cultural Trust Fund (Flushing)
- Hillcrest High School (Jamaica)
- \*Queens College - CUNY (Prince Street Campus) (Flushing)
- \*Queens College, City Univ. of New York (Flushing)
- \*Thomas Edison Vocational & Technical High School (Jamaica)

### **Congressional District 10**

- George Westinghouse HS (Brooklyn)

### **Congressional District 11**

- Medgar Evers College (Brooklyn)

### **Congressional District 12**

- H.S For Enterprise, Business and Technology (Brooklyn)

### **Congressional District 13**

- \*New Utrecht High School (Brooklyn)
- \*Ralph McKee CTE High School (Staten Island)
- The College of Staten Island (Staten Island)
- Tottenville High School (Staten Island)

### **Congressional District 14**

- DeVry Institute of Technology, Long Island City (A) (Long Island City)
- Information Technology High School (Long Island City)
- School of Cooperative Technical Education (New York)

### **Congressional District 15**

- A. Philip Randolph Campus High School (New York)

### **Congressional District 16**

- Bronx Coalition Community School For Technology (Bronx)
- Monroe College (ACC) (Bronx)
- \*Samuel Gompers Vocational & Technical High School (Bronx)

### **Congressional District 17**

- In-Tech Academy (Bronx)
- Rockland Community College (Suffern)
- Lehman College - CUNY (Bronx)
- WCC Yonkers Extension Site (Yonkers)

### **Congressional District 18**

- Saunders Trades and Technical High School (Yonkers)
- The College of Westchester, Inc. (ACC) (White Plains)
- \*Westchester Community College (Valhalla)

### **Congressional District 19**

- Orange-Ulster BOCES (Goshen)
- marist College (Poughkeepsie)
- Tech Center At Yorktown (Yorktown Heights)

### **Congressional District 20**

- \*Adirondack Community College (Queensbury)
- Cherry Valley-Springfield Academy (Cherry Valley)
- Columbia Greene Educational Center (Hudson)

- Glens Falls City School District (Glens Falls)
- Queensbury High School (Queensbury)
- WSWHE BOCES (Saratoga Springs)

#### **Congressional District 21**

- Abrookin Votec (Albany)
- Bethlehem High School (Delmar)
- Amsterdam High School (Amsterdam)
- Capital Region Career and Technical School (Albany)
- Cobleskill Richmondville High School (Richmondville)
- Cohoes High School (Cohoes)
- Fulton-Montgomery Community College (Johnstown)
- HFM BOCES (Johnstown)
- Hudson Valley Community College (Troy)
- Questar III (Troy)
- South Colonie Schools (Albany)
- \*Rensselaer Polytechnic Institute (Troy)
- Schalmont High School (Schenectady)
- Schenectady County Community College (Schenectady)
- \*Schenectady High School (Schenectady)
- South Colonie High School (Albany)
- SUNY-Cobleskill (Cobleskill)

#### **Congressional District 22**

- Hancock (Hancock)
- Marlboro Central High School (Marlboro)
- Newburg Free Academy (Newburgh)
- Sullivan County BOCES Career & Tech (Liberty)
- T-S-T BOCES Cisco Academy (Ithaca)
- \*Ulster County Community College (Stone Ridge)
- Ulster Vo-Tec (Port Ewen)

#### **Congressional District 23**

- Madrid-Waddington Central School (Madrid)
- Malone Central School (Malone)
- Minerva Central School (Olmstedville)
- Oswego BOCES (Mexico)
- Parishville Hopkinton Central School (Parishville)
- Saranac Lake Central High School (Saranac Lake)
- Seaway Tech BOCES (Norwood)

#### **Congressional District 24**

- \*Broome-Tioga BOCES (Binghamton)
- Candor Networking Academy (Candor)
- DCMO-CC Networking Academy (Norwich)
- Madison-Oneida BOCES (Verona)
- Marathon (Marathon)
- Mohawk Valley Community College (Utica)
- Vernon-Verona-Sherrill HS (Verona)

#### **Congressional District 25**

- Baldwinsville High School (Baldwinsville)
- North Syracuse Central Schools NSCS (North Syracuse)
- \*Liverpool Central School District (Liverpool)
- Onondaga Community College (Syracuse)
- Syracuse University (Syracuse)

#### **Congressional District 26**

- Batavia City School District (Batavia)
- Genesee Community College (Batavia)
- Greece Central Schools (Rochester)
- Erie 1 BOCES (Cheektowaga)
- Livonia High School (Livonia)
- Orleans/Niagara BOCES (Medina)
- Sweet Home Central School (Amherst)

#### **Congressional District 27**

- Erie Community College - Telecommtechnology (Orchard Park)

- Hutchinson Central Technical H.S. (Buffalo)
- Lake Shore Central High School (Angola)
- Riverside Institute of Technology (Buffalo)

**Congressional District 28**

- Educational Opportunity Center (Buffalo)
- Kenmore-Town of Tonawanda Union Free School District (Kenmore)
- Niagara Falls High School (Niagara Falls)
- \*University At Buffalo/Center For Applied Technolog (Buffalo)
- Wilson Magnet High School (Rochester)

**Congressional District 29**

- Alfred State College (Alfred)
- \*Alfred University (Alfred)

- Canandaigua City School District (Canandaigua)
- Corning Community College (Corning)
- Fairport High School (Fairport)
- Monroe #1 BOCES (Fairport)
- Monroe Community College (Rochester)
- Naples Central School (Naples)
- National Technical Institute for the Deaf (Rochester)
- Rochester Institute of Technology (Rochester)
- Technology Department (70-1101) (Rochester)
- Rush-Henrietta Central School District (Henrietta)
- Schuyler-Chemung-Tioga BOCES (Elmira)
- Steuben-Allegany BOCES (Hornell)
- Watkins Glen High School (Watkins Glen)



## 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/>



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