



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

<b>Networking Academy students</b>	4534
<b>Distinct cumulative academy students (having successfully completed a course)</b>	18,146
<b>Academy instructors</b>	182
<b>Total estimated cumulative contribution value to Ohio academies*</b>	\$11,715,570

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 Ohio.

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

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

<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>	88	7	51	6	6

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.** Ohio Academies and Students by Education Level

<b>Education Level</b>	<b>Number of Ohio Academy Students</b>	<b>Percentage of Ohio Students</b>	<b>Number of Ohio Networking Academies</b>	<b>Percentage of Ohio Academies*</b>
<b>Secondary schools</b>	2675	59%	64	69%
<b>Community colleges</b>	1496	33%	24	26%
<b>Universities</b>	317	7%	4	4%
<b>Other</b>	45	1%	1	1%
<b>Total by education level</b>	4534	100%	93	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 Ohio.

**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 Ohio

Occupation	Employment		Employment Change		Average Annual Openings	Occupational Employment as of May 2006 <sup>^</sup>
	2004	2014	Numeric	Percent		
Computer Support Specialists	15760	18210	2450	15	440	16740
Computer Systems Analysts	16280	19870	3590	22	540	14550
Network and Computer Systems Administrators	10860	14220	3360	30	460	11930
Network Systems and Data Communications Analysts	6970	10270	3300	47	410	6640
Computer and Information Systems Managers	8820	10550	1730	19	330	8460

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>





## Ohio Student and Graduate Profile

When Terezia Matejovic enrolled in the Cisco® Networking Academy® during her last two years at Briggs High School in Columbus, Ohio, she had little knowledge of information technologies. “I just jumped in,” says Terezia, who completed all four Cisco Certified Network Associate (CCNA®) courses within the program and received her CCNA certification prior to graduation. At the end of the school year, she was chosen to represent her school and the Networking Academy at a regional Cisco conference.

“While enrolled in the CCNA course, I was able to work hands-on with actual routers, setting up a simulated wide-area network (WAN) environment,” Terezia recalls. “Some of the Cisco labs were difficult to complete, but they gave me the opportunity to apply what I had learned, develop new methods of problem solving, and enhance my critical-thinking skills. The group discussions we had in class helped me gain confidence in my ideas, and I was able to develop my thoughts well enough to explain them to the other students. My goal was to become Cisco certified before I graduated, and I was very proud to accomplish that goal.”

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**“The skills that I obtained through the Networking Academy have been beneficial in starting my career. My technical comprehension of networks, routers, and configurations has been critical in my ability to execute projects and gain credibility with my field technicians.”**

### Terezia Matejovic

The program also helped Terezia develop her teaching skills. “Teamwork and communication are important when working on large-scale projects like WANs,” says Terezia. “I was able to share my skills with other students so that we could achieve our common goals by working together. These skills will be of great value in my career.” Academy instructor James Martiny notes that Terezia worked daily to assist a student who had difficulties focusing on class activities. “With Terezia’s help, the student became increasingly engaged in the lab projects, and was able to absorb the knowledge that the labs had to offer,” James recalls.



Terezia is especially proud to be the first in her family to obtain a college degree. She graduated from Xavier University in May 2006 with a bachelor of science degree in business administration. Shortly after graduation, Terezia was hired as a customer care agent with Contingent Network Services. Within three months, she was promoted to project coordinator and is now the team lead for her department.

When asked how her education factors into her work, Terezia says, “The skills that I obtained through the Networking Academy have been beneficial in starting my career. My technical comprehension of networks, routers, and configurations has been critical in my ability to execute projects and gain credibility with my field technicians. The Networking Academy helped me develop and enhance personal skills that I use to communicate with coworkers. These skills have established a firm foundation from which to build my career.”

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**Shortly after graduation, Terezia was hired as a customer care agent with Contingent Network Services. Within three months, she was promoted to project coordinator and is now the team lead for her department.**

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To learn more about the Networking Academy at Briggs High School, visit [www.columbus.k12.oh.us/briggshs](http://www.columbus.k12.oh.us/briggshs)



## Active Cisco Networking Academies in Ohio

### 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 Ohio 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 Ohio Congressional Districts

Number of Ohio Congressional Districts	Number of Ohio Congressional Districts <u>with</u> Networking Academies	Number of Ohio Congressional Districts <u>without</u> Networking Academies	% Ohio Congressional District Penetration
18	17	1	94%

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 Ohio 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 2

- Anderson (Cincinnati)
- Clermont College (Batavia)
- Little Miami (Morrow)
- \*Mariemont City School District (Cincinnati)
- Sycamore (Cincinnati)

#### Congressional District 3

- Centerville City Schools (Washington Township)
- Dayton Public Schools (Dayton)
- Miami Valley Career Technology Center (Clayton)
- Northmont City Schools (Englewood)
- \*Sinclair Community College (Dayton)
- Warren County Career Center (Lebanon)

#### Congressional District 4

- James A Rhodes State College (Lima)

- Lima Senior High School (Lima)
- Mansfield Senior High (Mansfield)
- Marion City Schools (Marion)
- Marion Technical College (Marion)
- North Central State College (Mansfield)
- \*Ohio CATC (TRECA) (Marion)
- Owens Community College - Findlay (Findlay)
- Pioneer Career and Technology Center (Shelby)
- TRECA Digital Academy (Marion)
- \*TRECA-Mallard (Marion)
- Tri-Rivers Career Center (Marion)
- \*Tri-Rivers Educational Computer Association (TRECA (Marion)

### **Congressional District 5**

- \*Cisco Academy of Northwest Ohio (OECN) (Archbold)
- Four County Career Center (Archbold)
- Sentinel Career Center (Tiffin)
- Terra Community College (Fremont)
- The Technology Center (Fremont)

### **Congressional District 6**

- Jefferson County Joint Vocational School/Jefferson (Bloomingdale)
- Mahoning County Career & Technical Center (Canfield)
- Swiss Hills Career Center (Woodsfield)

### **Congressional District 7**

- Clark State Community College (Springfield)
- Fairfield Career Center (Carroll)
- Ohio University-Lancaster (Lancaster)
- Springfield Clark JVS(Springfield)
- Wright-Patterson SOJT (Wright Patterson)

### **Congressional District 8**

- Cincinnati Christian Schools (Fairfield)
- \*Edison Community College - Regional/Local (Piqua)
- Greenville High School (Greenville)
- Northridge LSD (Mont.) (Dayton)
- Tri Star Career Compact (Celina)

### **Congressional District 9**

- Bowling Green State University Firelands College (Huron)
- Ehope Career Center (Milan)
- Lorain County JVS (Oberlin)
- Owens Community College - Toledo (Toledo)
- Vermilion Local Schools (Vermilion)
- Whitmer Career and Tech Center (Toledo)

### **Congressional District 10**

- Cuyahoga Community College - West (Parma)
- James Ford Rhodes (Cleveland)
- Parma City School District - Normandy (Parma)
- Parma City School District - Valley Forge (Parma)
- Polaris Career Center (Middleburg Heights)
- West Shore CTPD Lakewood High School (Lakewood)

### **Congressional District 11**

- Bedford Local Schools (Bedford)
- Cleveland Heights High School (Cleveland Heights)
- \*Cleveland Municipal School District (Cleveland)
- \*Cuyahoga Community College (Cleveland)
- Cuyahoga Community College - East (Highland Hills)
- East High School (Cleveland)
- Euclid High School (Euclid)
- Glenville High School (Cleveland)
- Jane Addams Business Careers Center (Cleveland)
- South High School (Cleveland)

### **Congressional District 12**

- Career & Technology Education Centers of Licking C (Newark)
- Columbus Northeast Career Center (Columbus)
- \*Columbus Public Schools (Columbus)
- Delaware Area Career Center / Adult Education (Delaware)
- Dublin City Schools (Dublin)
- New Albany High School (New Albany)

### **Congressional District 13**

- Akron Public Schools - East High School (Akron)
- Barberton City Schools (Barberton)
- Copley-Fairlawn City Schools (Copley)
- Cuyahoga Valley Career Center (Brecksville)

- Lorain City Schools Admiral King (Lorain)
- Lorain City Schools Southview (Lorain)
- \*Lorain County Community College (Elyria)
- \*The University of Akron (Akron)

**Congressional District 14**

- Auburn Career Center (Painesville)
- Lakeland Community College (Kirtland)
- Mayfield City School District (Cleveland)
- Perry Local Schools (Perry)

**Congressional District 15**

- Columbus Briggs High School (Columbus)
- Columbus Centennial High School (Columbus)
- Columbus Northwest Career Center (Dublin)
- Columbus State Community College/Continuing Profes (Columbus)

**Congressional District 16**

- Ashland County-West Holmes Career Center (Ashland)

- Jackson High School (Massillon)
- Plain Local School District (Canton)
- R. G. Drage Career Center (Massillon)
- Stark State University (North Canton)
- Wayne County Schools Career Center (Smithville)

**Congressional District 17**

- Maplewood Career Center (Ravenna)
- \*Youngstown State University - Regional SC (Youngstown)
- YSU Academic CNAP (Youngstown)

**Congressional District 18**

- Belmont Technical College/Belmont Career Center (Saint Clairsville)
- Buckeye Career Center (New Philadelphia)
- Hocking College (Nelsonville)
- Mid-East Career and Technology Centers/Zanesville (Zanesville)
- Zane State College (Zanesville)





## 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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