

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

Networking Academy students	706
Distinct cumulative academy students (having successfully completed a course)	2660
Academy instructors	27
Total estimated cumulative contribution value to South Dakota academies*	\$1,855,632

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 South Dakota.

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

Table 2. Networking Academy Curricula in South Dakota

Curriculum	CCNA®	CCNP®	IT Essentials	Security	Wireless
Number of academies by curriculum	10	1	14	0	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. South Dakota Academies and Students by Education Level

Education Level	Number of South Dakota Academy Students	Percentage of South Dakota Students	Number of South Dakota Networking Academies	Percentage of South Dakota Academies*
Secondary schools	268	38%	13	76%
Community colleges	438	62%	4	24%
Universities	0	0%	0	0%
Other	0	0%	0	0%
Total by education level	706	100%	17	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 South Dakota.

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 South Dakota

Occupation	Employment		Employment Change		Average Annual Openings	Occupational Employment as of May 2006 [^]
	2004	2014	Numeric	Percent		
Computer Support Specialists	2,190	2,540	350	15	60	1,380
Computer Systems Analysts	740	920	180	24	30	550
Network and Computer Systems Administrators	990	1,320	330	33	40	1,090
Network Systems and Data Communications Analysts	470	740	270	58	30	580
Computer and Information Systems Managers	200	250	50	23	10	180

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/oessrcst.htm>

South Dakota Student and Graduate Profile

With an appetite for knowledge and a passion for technology, Houston King excelled in his academic pursuits at an early age. He earned an associate of science degree and early acceptance to Massachusetts Institute of Technology (MIT) before his high school graduation. At the same time, while he was attending Lake Area Technical Institute (LATI) in Watertown, South Dakota, Houston completed the Cisco® Certified Network Associate (CCNA) curriculum and passed his CCNA certification. “The Cisco Networking Academy® has given me the jumpstart needed to pursue a higher degree in education and has opened the door for obtaining a rewarding career in the information technology industry.”

Having completing the majority of his required high school courses by his junior year, in May 2007 Houston earned an associate of science degree from LATI and his CCNA and CCNP certifications just two weeks before he received his high school diploma.

Houston has been on the technology track since the seventh grade when he dual-enrolled in his first course at LATI in the computer information services program. “Investigating the workings of technology has always intrigued me. Computers and networking technologies are areas where I was able to focus my interest,” says Houston. Having completed the majority of his required high school courses by his junior year, in May 2007 Houston earned an associate of science degree from LATI and his CCNA and Cisco Certified Network Professional (CCNP®) certifications just two weeks before he received his high school diploma. “I enjoyed the mix of both the practical hands-on experience and higher level theory that the Networking Academy introduced. I am excited to use my skills to obtain a job and excel at my studies at MIT.”

Along with his academic studies, Houston served as Vice President of LATI’s tech club and placed second at the national 2007 SkillsUSA internetworking competition. Houston has also given back to his community, working as a Website collaborator and serving as the multimedia technician for his local church, all the while maintaining a 3.95 GPA.

In the spring of 2007, Houston was a recipient of a Cisco Networking Academy 4R Recognition Award in the Results category, which recognizes students and graduates who demonstrate the impact of the Networking Academy in creating opportunities for career, educational, or personal development. “Houston has several interests and very lofty goals. He does not do anything halfheartedly,” says his academy instructor at LATI, Mark Wayt. “Knowing Houston as I do, I expect him to continue to achieve the goals he sets for himself.”

Currently, Houston is enrolled at MIT in Cambridge, Massachusetts, where he earned early acceptance in December 2006. He is pursuing a degree in computer science and hopes to graduate in 2011. His ultimate goal is to obtain a job in information technology and earn Cisco Certified Internet Expert (CCIE®) certification by age 20.

For more information on the Networking Academy at Lake Area Technical Institute, visit: <http://lati.tec.sd.us/>



Active Cisco Networking Academies in South Dakota

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 South Dakota 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 South Dakota Congressional Districts

Number of South Dakota Congressional Districts	Number of South Dakota Congressional Districts <u>with</u> Networking Academies	Number of South Dakota Congressional Districts <u>without</u> Networking Academies	% South Dakota Congressional District Penetration
1	1	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 South Dakota 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 – At Large

- Canton Public School (Canton)
- Boxelder Job Corps (Nemo)
- Dakota Valley High School (North Sioux City)
- Deuel School District (Clear Lake)
- Douglas School District (Box Elder)
- East Central Multi District (Brookings)
- *Lake Area Technical Institute (Watertown)
- Mitchell Senior High (Mitchell)
- *Mitchell Technical Institute (Mitchell)
- Rapid City Academy (Rapid City)
- Sisseton Wahpeton College (Sisseton)
- *Southeast Technical Institute (Sioux Falls)
- Sturgis High School (Sturgis)
- Wall High School (Wall)

- *Western Dakota Technical Institute (Rapid City)
- Yankton School District (Yankton)

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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