



Putting the “T” in STEM Education

STEM = Science – **Technology** – Engineering – Math



The issue

In the United States, business and education stakeholders worry about the lack of technical expertise in our future workforce, an issue that could impact global economic competitiveness.



Use Cases

The STEM Crisis



In 2009, only 18% of bachelor’s degrees were STEM-related, down from 24% in 1985



75% of students in community college don’t graduate



Students in the U.S. rank only 18th in math and 13th in science literacy

Sources: US Congress Joint Economic Committee, Center for an Urban Future, and Organization for Economic Cooperation and Development

By 2018, there will be 1.2 million unfilled STEM jobs in the United States. Without major investment in new talent, there will be an acute shortage of qualified applicants for these openings.

North American schools face increasing pressure to offer more rigorous studies in science, technology, engineering, and math – what’s known as “STEM” education. Low test scores in math and science, and fewer students choosing STEM degrees, are evidence that students lack foundational skills in STEM subjects. To inspire young people to take advantage of growing opportunities in STEM fields, schools and colleges need to offer more engaging STEM education courses.

Cisco is committed to inspiring more people to pursue STEM education and careers. Through mentoring, IT training, and support for schools and nonprofits, we are working to increase the pipeline of STEM talent around the world. For nearly two decades, Cisco has brought cutting-edge technology and STEM education to millions of students, helping prepare them for higher education and successful careers.

Cisco STEM Principles



Preparing the 21st century IT workforce



Inspiring students through mentoring



Transforming classroom models at scale



Opening doors of opportunity for girls and students of all backgrounds

Cisco Networking Academy: Igniting the Fire

The Cisco Networking Academy® program provides comprehensive coursework to put the “T” in STEM education, teaching the technology skills that are in high demand in all industries today. Students learn basic to advanced information communications technology (ICT) and networking skills, and build important system and process thinking skills.

Networking Academy courses explore concepts important for science, math, and engineering thinking, as well as computer science. Knowledge in these areas of study is reinforced through hands-on activities and labs, building a more solid foundation for all future STEM studies.

Source for 1.2 million unfilled STEM jobs: U.S. Dept. of Commerce





STEM and Other Education Standards

Networking Academy coursework covers STEM Cluster Topics, many of the reading and writing Common Core Standards for technical subjects, and Next Generation Science standards. Students prepare for advanced studies, globally recognized IT and networking certification exams, and high-demand, high-wage jobs. Networking Academy builds a foundation for success in over 400 STEM careers.

21st-Century Career Skills

Networking Academy courses also foster non-technical skills essential for STEM professionals:

- Communication, collaboration, and leadership
- Problem-solving and analysis
- Reflection and creativity
- Intellectual curiosity

Student Engagement

Real-world content and hands-on labs make Networking Academy courses relevant to diverse students. Teaching materials include online instruction, team projects, videos, games, simulations, and social networking. Skills competitions motivate students and showcase their talents to potential colleges and employers.

Teacher Expertise

STEM education initiatives emphasize the need to increase the number of qualified educators. Networking Academy instructors receive training, ongoing technical support, and professional development within a global community.

Lifelong Learning – The Cisco Approach

Networking Academy is just one part of Cisco’s commitment to STEM education at every stage of life.

Early Learning (Grades 1 to 3)

Numeracy and literacy.

Young Learners (Grades 4 to 8)

Informal learning, with emphasis on critical-thinking and problem-solving applied to STEM disciplines.

STEM Depth (Grades 9 to 12)

Engaging, relevant STEM studies to prepare students for college and/or career success.

Post-Secondary

Two to four-year college STEM certification and degree programs.

Adult Retraining

STEM retooling for new jobs or career advancement.



Want to Learn More?

Cisco Networking Academy: <http://www.netacad.com>

Cisco’s STEM initiatives: csr.cisco.com/stem

U.S. STEM topics: <http://stemconnector.org>

Cisco Corporate Social Responsibility

csr.cisco.com



Cisco Corporate Affairs gives people the skills they need to thrive in a connected world. We empower them to harness technology to solve global problems and speed the pace of social change.

Our Corporate Social Responsibility efforts focus on five areas: giving people the skills to thrive and to speed the pace of social change; using our technology to improve environmental sustainability; conducting our business ethically; creating a workplace where our employees thrive; and maintaining our high standards for ethics, labor rights, health, safety, and environmental sustainability throughout our supply chain. Learn more at csr.cisco.com