



## U.S. High School Empowers Students to Succeed in a Global Community

Cisco® Networking Academy® courses engage students in technology learning as part of a liberal arts education.

### Educational Challenge

Columbus City Schools is a large urban district with approximately 56,000 students and a stated mission to help ensure that “each student is highly educated, prepared for leadership and service, and empowered for success as a citizen in a global community.”

“CCNA Discovery offers a new teaching philosophy, which makes it very appropriate at the high school level. The reading style and highly visual approach are friendlier, and the courses offer more hands-on learning opportunities. Kids are engaged quickly, and engaged students have greater learning comprehension.”

Jim Martiny, Academy instructor, Briggs High School

Briggs High School is one of 17 high schools in the system. Although few Briggs students plan to join the technology field directly after graduation, the school system, parents, and students recognize that technology has become an important element of a liberal arts education.

Jim Martiny, a computer science teacher at Briggs, recognized the importance of networking skills in particular. “I had been creating my own networking coursework and lab exercises for students,” explains Martiny. “In 1999, I was invited to a presentation on Cisco Networking Academy. It offered everything: an administrative system, curriculum, testing, and labs. I attended the training and began teaching the material that year.”

### Network Solution

Cisco Networking Academy provides rigorous, interactive curricula that align with U.S. educational standards and support a range of learning styles and career goals. To make courses affordable for public schools, such as Briggs High School, Networking Academy offers the following features:

- Interactive online curricula, Packet Tracer network simulation software, online assessments, and instructor materials at no cost
- A substantial discount on networking equipment for hands-on labs
- Instructor training on a cost-recovery basis
- Innovative tools and resources to help students build professional career pathways

In 2007, the Networking Academy course offerings evolved to keep pace with the changing requirements of an increasingly connected world and the growing demand for technical skills in a competitive global marketplace. New courses are tailored to provide students with the skills needed to pursue rewarding ICT careers in industries ranging from technology and finance to medicine and entertainment. The new CCNA Discovery, CCNA Exploration, and IT Essentials curricula include embedded, computer-guided features that enable students to explore topics in more depth.

Martiny chose the new CCNA Discovery curriculum to replace the previous Cisco CCNA® courses offered for students in grades 10 through 12. Students in grades 10 and 11 can begin with the first CCNA Discovery course, Networking for Home and Small Businesses and move onto Working at a Small-to-Medium Business or ISP. Martiny plans to offer the final two CCNA Discovery courses; Introducing Routing and Switching in the Enterprise and Designing and Supporting Computer Networks for students in grades 11-12.

## Results

In the 2007-08 school year, half of the sophomore class at Briggs registered for the first CCNA Discovery course, which Martiny attributes to both his promotional efforts at the middle school, and to the program's approachable, hands-on learning style. The high level of interest required another instructor to be trained so the class could be divided into three sections. One section is an all-girls class, a project that Martiny is piloting for the year.

"Studies have shown that single-gender classes can be very productive," says Martiny. "The parents supported the class as well, so the Board of Education approved the project." Martiny believes that having an all-girls class for the first course will help students develop more confidence with the technology before advancing to the next level in a coeducational setting, which more accurately represents the reality of the workplace.

The reading level of CCNA Discovery has made it more approachable for the majority of students, who can easily complete the online interactive activities and quizzes. This has enabled Martiny to spend less time lecturing in the classroom and provide more time for students to work collaboratively to solve lab activities with real equipment.

Briggs High School also uses the Packet Tracer network simulation software from Cisco, which allows students to create network topologies and configure systems as though they have a full rack of equipment. "We use Packet Tracer every day," says Martiny. "The students like it because they complete their labs more quickly. Students can even complete their labs at home."

Many of Martiny's students return to visit after graduation and report that the Cisco Networking Academy courses that they completed have helped them prepare for a range of careers. Twin sisters who completed the program have continued their education to become math teachers. One former student joined the Ohio National Guard and spent 18 months in Iraq, where he used his Networking Academy knowledge to configure switched networks for the U.S. Army in Tikrit.

"That student and I stayed in touch by instant messaging the entire time he was in Iraq," says Martiny. "He has since returned to finish his senior year at Ohio State University."

## Next Steps

Martiny and fellow teacher Kevin Prenger will teach the complete CCNA Discovery curriculum next year, and they expect student participation to grow, based on the popularity of the new courses. "CCNA Discovery is a wonderful curriculum," says Martiny. "I would recommend it to other academic institutions as they seek to broaden their reach and engage students in preparing for work in the 21<sup>st</sup> century."