Offering Online Students
Real Learning, Real Experiences:
Westchester Community College and LabSim

Case Study

The Need: Computer Security Training and Experience for Online Students

Westchester Community College in Valhalla, New York, has nearly 12,000 part- and full-time students, as well as an additional 8,000 continuing education students. Almost one-half of Westchester students are over age 25, returning to college to advance their career. With more than 50 associate and certificate programs, daytime, evening, and online students have plenty of options for their education and career development. One of those options is Computer Security and Forensics.

Security is one of the most in-demand areas of the information technology sector. The Wall Street Journal reported that "more than two million technology-related jobs are expected to be created by 2018, according to the Bureau of Labor Statistics" (Diana Middleton, "Landing a Job of the Future Takes a Two-Track Mind"). Among those two million jobs, online security was pinpointed as an area that will experience the strongest growth.

Professor Robert Albano, member of the Computer Information Systems department at Westchester Community College, wanted to create an online Computer Security and Forensics certificate program in which students would prepare for Security+, an industry-recognized certification. Albano needed a system to do security lab experiments. However, teaching computer security—as well as other IT subjects—to online students is difficult. Security+ covers topics such as access control, cryptography, and protecting against risks and attacks—areas of IT that require constant learning and practice. Albano said, "You have to get students real experience. Unless you have hardware and software for each online student to practice on, how will they master the tasks?" Albano searched for a way to give his students that real experience online.

The Solution: LabSim Security+ Training Course

"I started using LabSim three years ago, after I attended a one-hour lecture on using LabSim at the League for Innovation Conference," Albano said. "That's the best way to really excite people about LabSim—let them see it. It's really a useful system." LabSim is a computer-based IT training that offers written lessons, expert-led videos, hands-on online labs, and realistic certification practice exams in every course. The online labs in LabSim simulate a PC lab with an interactive workbench and ask students to complete realistic scenarios using the virtual equipment. Albano has found LabSim to be "perfect for distance learning" because his students do real lab experiments at a distance. "LabSim solves the problem of hardware and software," Albano said.

LabSim
ONLINE LABS

"My online students do one LabSim assignment each week, as well as read a chapter a week in a textbook. It's a rigorous schedule, and my students do a lot of work," Albano said. His weekly assignments have three sections: Procedure, Reflection, and Research. In the Procedure section, instructions tell the students exactly what sections of LabSim to complete—videos, demonstrations, and lab simulations. In the Reflection section, students articulate what they learned from the LabSim components. Lastly, in the Research section, students choose any topic covered in the LabSim sections, research the subject online, and write a short summary of their findings. When students complete the assignment, they upload it to Blackboard.

"My good students really love LabSim—videos and labs and all," said Albano. "They like LabSim because they learn a lot from it. It's also excellent for me to do the lab work with the students."

Albano is serious about giving his students hands-on experience, so he also serves as faculty advisor to an on-campus student club called Computer Security and Forensics. Several of his students using LabSim in online classes participate in the club as well. In the advisor role, Albano meets with club members every Wednesday morning in the computer lab, and they solve real problems for other faculty and students—sometimes recovering data, restoring an entire computer, or getting viruses off of a computer. The club takes trips together to experience more about security and forensics, traveling to the New York State Crime Center, the Computer Forensics show in New York City, the campus data center, and to local businesses. IT security professionals also give presentations at the weekly meetings.

Students who use LabSim in Albano's online classes and who supplement their training by attending the Computer Security and Forensics club meetings are experiencing exceptional opportunities and gaining hands-on learning in the IT security sector. The formal training from LabSim—including video trainings, written lessons, and practical, realistic labs with feedback for remediation—combined with the real-life experiences in the student club, is a powerful blend of learning methods.

The Results: Interactive Learning that Goes Hand-inHand with Real Job Tasks

"LabSim has been an excellent resource for online learning," said Albano, who feels that LabSim Security+ prepares his online students both to pass certification exams and to succeed in IT careers. "Serious students who want to learn IT really love LabSim," he said.

One of those serious students at Westchester is Jeanine Babic. Babic has taken advantage of the opportunities for hands-on learning in LabSim online courses and in Albano's student club. "Using LabSim, I've realized how helpful the tutorials, written lessons, videos, and interactive labs are—not only in class, but also in my part-time job as a Deskside Support Representative for IBM," said Babic. "LabSim labs have been a very valuable resource for building knowledge and understanding how to apply it in real life."

In Babic's job, she completes security-related tasks with both hardware and software, and she said that LabSim has tied in to everything she does. "Sometimes we forget things we learn in school. Then in the workforce, it can be a struggle to figure out what to do," Babic said. "But with the LabSim interactive labs, it's been really awesome how everything I learn and practice ties together and goes hand-in-hand with my job."

In fact, Babic found LabSim training so useful in her Westchester online courses that she purchased additional LabSim courses—A+ and Network+—to further her training on her own. "I used Transcender training before I found LabSim, and Transcender's emphasis was more on memorizing answers. The interactive learning in LabSim is so much better. People ask me about it, and I tell them they definitely need to take advantage of LabSim."

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