College asks experts what to teach cyber-security students

By Kent Pierce
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SOUTHINGTON, Conn. (WTNH)- With hacker attacks on the rise, one local college wants to offer a degree in cyber-security. Naugatuck Valley Community College held a summit this morning with a whole bunch of people who know about internet security, telling officials from NVCC what they should be teaching their students about internet security.

Hackers stole the information of millions of Anthem customers, the emails of Sony executives, and at banking technology company COCC in Southington, they fend off hackers al the time.

"We'll see anywhere from 5 to 50,000 unique attacks each month," according to COCC Chief Information Security Officer Kevin Hamel. "It's never a dull moment."

That's why COCC is hosting a cyber-security forum with experts from industry, public service and law enforcement. Former police chief and current Waterbury Mayor Neil O'Leary counts as a least two of those.

"Cyber security is of the utmost importance because it is the wave of the future with the technology advances that we have with the internet and so on," O'Leary said.

O'Leary also chairs the advisory board of Naugatuck Valley Community College. The college is using the information from this summit to help design courses for a new degree in cyber-security. It's a little different from how college used to work. Instead of teaching kids a set of skills and hoping they match up with what businesses want, the college president says NVCC is working with businesses to determine what they're looking for and designing the curriculum around that.

"To have the experts tell the college what are the kinds of things they would expect from our students were they to hire them as employees," said Naugatuck Valley Community College President Dr. Daisy Cocco De Filippis.

With hackers getting better and better, and with more of our lives lived in cyberspace, there has never been more of a need for cyber-security experts.

"So it's absolutely key," said COCC's Hamel. "You know we need to make sure the young generation has a good focus on security given all the threats that are out there in the world around us today."

This is just the latest in a series of summits the college is having. They've already had one with the manufacturing industry and they have five more scheduled.

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How the wild West of cyberspace will be won

BY DAVID KRECHEVSKY
REPUBLICAN-AMERICAN

SOUTHINGTON — Naugatuck Valley Community College President Daisy Coco de Filippis compares cyberspace to the "wild, wild West" — filled with both promise and bandits.

That makes the digital age both a blessing and a curse,

> **"WE TEACH SPANISH. WE TAUGHT LATIN. BUT DO WE TEACH A LANGUAGE CALLED CODING? NO. WHAT'S THE LANGUAGE OF THE FUTURE? CODING."** — SEN. JOAN V. HARTLEY, D-WATERBURY

she said Wednesday.

"Goya would say, 'the dreams of reason create monsters,'" she said, referring to the etching "The Sleep of

Reason" created by Spanish artist Francisco Goya in the late 1700s. "How do we control this wild, wild West of cyberspace?" she asked.

NVCC expects to provide some help in answering that question soon. The school is developing an associate degree in cybersecurity that it hopes to offer in the 2016-17 school year. As part of that effort, NVCC held a cybersecurity summit Wednesday, attracting about 35 people from

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business, government and education to the Connecticut Online Computer Center here.

COCC, as it is known, employs 400 people and provides information technology and cybersecurity services to banks and credits unions, work it has done in one form or another since first opening in 1967, according to Kevin Hamel, first vice president and chief of information security for the firm.

Coco de Filippis said the summit's goal was to hear informed comment on the proposed cybersecurity curriculum. "How do we articulate this program in such a way that when our students graduate, you will be happy to hire them?" she asked attendees.

The proposed curriculum combines four new courses with courses already offered as part of NVCC's degree programs in computer information systems and criminal justice. In all, it includes 61 credits.

"As we finish the degree program, we want to make sure it is relevant," said Irene Rios-Knauf, NVCC's dean of academic affairs. "Our primary goal is to prepare students for that emerging job market."

ACCORDING TO THE CONNECTICUT Technology Council, there are nearly 3,000 technology companies in the state, but the cybersecurity workforce also includes IT employees at insurance companies, financial institutions and defense contractors. In recent testimony to the state legislature's Commerce Committee, Bruce Carlson, president of the technology council, said the state has "a relative paucity of cybersecurity consulting companies."

"From a planning perspective, growing a workforce with cybersecurity skills is important to Connecticut's future," he told

PHOTOS BY DAVID KRECHEVSKY REPUBLICAN-AMERICAN

Irene Rios-Knauf, left, dean of academic affairs at Naugatuck Valley Community College in Waterbury, discusses the school's goal of developing an associate degree program in cybersecurity on Wednesday. At right, Kevin Hamel, first vice president and chief information security officer for the Connecticut Online Computer Center, discusses his company's personnel needs during a cybersecurity summit held at his company in Southington on Wednesday by Naugatuck Valley Community College.

the committee.

Sen. Joan V. Hartley, D-Waterbury, has co-sponsored legislation in the current session that seeks to require the commissioner of the state Department of Economic and Community Development to establish "a cybersecurity jobs pipeline" and promote the growth of cybersecurity businesses in the state.

During Wednesday's summit, Hartley cited a statistic — published in a 2013 study by computer security firm Mandiant Corp. — that estimated that 300,000 cybersecurity jobs nationwide are unfilled. She said it is well past the time for colleges and universities to train future workers in the field.

"We teach Spanish. We taught Latin. But do we teach a language called coding? No," she said. "What's the language of the future? Coding. If you're going to be conversant in information technology, it's about programming and coding."

COCC's Hamel, though, said cybersecurity is about more than just programming.

"You have to understand the business, and you have to understand the business flow, because at the end of

the day the computer's just a tool that you're using to make that process easier," he said. "You need to understand, where is that data supposed to go, how is that application supposed to work? That's really what allows you to marry that technical knowledge and say, 'something doesn't look right here.'"

In addition to Hamel, six other speakers from businesses or government entities that work with information technology discussed what they do and their staffing needs during the summit. That included Damian Laviolette, chief information security officer for Waterbury-based Webster Bank, who said the bank now has 40 open information technology positions.

Coco de Filippis said NVCC already has the instructors on staff and much of the equipment it needs to begin teaching the new in cybersecurity courses. While the program still needs approval from the state before it can be offered, she said she is confident the program will be available by the fall of 2016.

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