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Students evaluate city's digital security

By [Sarah Newell Williamson](#) | Hickory Daily Record

A recent school project saved Claremont several thousand dollars and helped some students decide what they wanted to do after they graduated.

As the class project for two of Catawba Valley Community College's cyber crime technology programs, four students worked with Claremont to determine risks to the city's information systems and how to better protect them.

"I think there's more value to the community if we have the students help and get involved," said Tom Foss, executive director for the Center for Information Assurance and Instruct for Cyber Crime and Information Security at CVCC. "We wanted to give the students real-world experience. Mayor Glenn Morrison said he'd be glad for the students to work with Claremont."

Robert Myers, Sharrie Jolly, Dawn Dugan and Tina Teague, who were all taking both the cyber crime trends class and the cyber crime capstone seminar class, worked with city officials for several months to determine how safely their electronic information was kept.

"We looked to see how the computers ran, what their backup plans were, what the software was, how secure the server was," said Jolly, 41. "We used a software program to see if the water bill data was secure in the server."

Jolly said the software program they used makes some recommendations for improvement. Currently, Claremont has some work they need to do to make their city more secure, according to the students.

Teague said the students met with city officials twice a week, although they worked on the project every day. The city fire department, police department, town hall and utility building were examined, from the computers to the structures themselves.

The students wanted to ensure the city's data, from water bill customers to other sensitive information, would be secure not just from computer hackers, but also in the event of a tornado, a train coming off the railroad tracks with toxic chemicals or other scenarios.

Dugan said the students went building-by-building, step-by-step, examining everything that could be compromised.

"We got information from the computers, to see what computer programs they had, like Windows Vista, and what updates they had, like spyware," Teague said. "We also looked to see how secure the buildings were, and if they had sprinklers."

Although the fire department was a fairly new building and was well equipped, Teague said city hall was older and not as well prepared to deal with a natural disaster. The computers used in all city offices were about the same.

"They had some computer security and support and passwords in place," Dugan said. "There are some

things they can definitely improve on, which is why they asked us to come in."

The city of Claremont had never had anyone look at its security before, said Patrick Niland, Claremont city manager.

"It's good that we had someone look at it," he said. "We gave them access to anything that was public access. Payroll and police department information was limited."

Niland said city employees were happy to work with the students, since they were providing a service to Claremont that, if they were paying for it, would normally cost \$25,000 to \$40,000.

"We started in January, and it took 16 weeks and many hours to do this," Jolly said. "But we enjoyed it. The city of Claremont was really easy to work with."

Claremont is already implementing some of the suggestions students made.

"We're doing some of the policies on software equipment, and we're backing up our hardware, making sure things are secure," Niland said. "This is something we want reviewed periodically, though we won't be able to do it to the depth the students did."

Foss said the students also suggested Claremont partner with Conover to have a business continuity plan. "If something happened to one of the cities, the cities could work out a mutual aid agreement with the other, because the likelihood of something happening to both at the same time is pretty slim," he said. "This way, the city operations could still continue."

The project the students conducted also helped two of them decide what they want to do after they complete their two-year degree. Although Teague and Dugan both got into the cyber crime program because of their children, thinking they would work to help clean up cyberspace, working with Claremont made them realize they wanted to choose a different path.

"I like helping people realize how vulnerable they can be, and help them see how to keep people from attacking them," Teague said. "I would love to do consulting like we did for Claremont."

Dugan agreed.

"This was wonderful. It completely changed me and helped me decide where I want to go with it. I want to try to secure the information you have on the Web to keep unauthorized users from getting it," she said. "I looked into cyber crime and thought I'd be interested in it, but this changed my mind. I'd like to do internal audits for risk assessment."

And all those hours the students put into the project paid off: the students got an A on the project, which is the entire grade in both classes.