Fire Protection Technology: The Cutting Edge of Firefighting

By LouAnne Kincaid

It only takes one fire tragedy to remind us how important it is to have experienced and educated fire services personnel. The high-risk job of a firefighter can be fast, furious and exciting, but the more educated and better trained the firefighters, the better the outcome of any emergency fire situation.

Catawba Valley Community College has always offered in-service training to firefighters in the Catawba Valley, but now the college is offering a two-year associate degree to give firefighters the technical and administrative education they need to further their careers. The new program is called Fire Protection Technology.

"There is a difference between training and education," explains G. Winfield Abee, Regional Fire Rescue Training Coordinator in the North Carolina Community College System and interim program chair of the CVCC program. "Fire departments do a lot of hands-on technical training. This (CVCC) program combines the administrative and technical training in a way that advances careers."

Most fire departments require at least a two-year degree to advance to the position of captain and above, and the Fire Protection Technology degree gives the students the edge they need.

Student Shane Stewart of Maiden signed up the first semester. "I've worked as a volunteer for 13 years and as a paid firefighter for Hickory for three and a half years. I don't always want to ride the back of the fire truck. Like the others here in class, I want to move up in the ranks."

Firefighters get the educational edge…

Based on the Federal Emergency Services Higher Education Core curriculum model (FESHE), the classes are intended to give students the professional and technical knowledge they need to make the best decisions for fire protection in the field and in the office. Course work includes classroom and laboratory activities in hydraulics and water distribution, chemistry of hazardous materials, arson investigation, fire protection safety, strategies and tactics, managing fire services, fire protection law, inspections and codes and emergency management.

"This is the only associate degree program available locally that actually pertains to fire protection," explains Kevin Yoder, chief of the Newton Fire Department, an instructor in the program and a member of the advisory board that guides it. "In order to advance in their careers, a lot of firefighters resorted to getting degrees in business or management. But, this program gives the firefighters that first leg, and since it transfers to UNC Charlotte or Western Carolina University, they can go on and get their bachelor's degree in their fire protection programs as well."

According to Yoder, many departments reimburse their firefighters for tuition and fees. Newton Fire Department does and three of the last firefighters were hired because of their experience ***with*** the expectation they would complete their degree.

Randy Walker was one of those men. "I have been a firefighter for five and half years, but I want to advance and move up the ladder. So, I am here to get the degree," explains Walker.

Flip-flop classes meet firefighters' schedules

With their unusual schedules—usually 24 hours on duty and 48 hours off—firefighters have

A Conover firefighter mans the hose during a controlled house burn exercise.
Photograph by Lori Whitaker

Firefighters on backup line.
Photograph by Lori Whitaker

A student dons his personal protective gear.
Photograph by Ulrike Wright

a tough time making a traditional college classroom schedule. The CVCC Fire Protection Technology program accommodates those needs by offering what's called flip-flop scheduling. Each class is offered twice a week, once during the day and again on another day in the evening. Students attend one of the two weekly sessions, which ever one best fits their schedule that week.

Ashley Starnes of Bethlehem usually makes the afternoon classes. A volunteer fire fighter, he currently works in bills and materials for a local furniture company. "The company really supports education so they allow me to work my schedule around to make the classes."

Due in large part to the flip-flop scheduling and the demand, the Fire Protection Technology program has one of the largest enrollments for a new program in recent CVCC history. "It's better for the students and the college," says Yoder. "When I was working for my degree, I had to do all kinds of shift trades with other firefighters to try to find a way to get to class. Flip-flop works for just about everybody."

For the experienced firefighter, newly hired and the wannabe…

Students range in age from 19 to 50 with all levels of experience in between. Nineteen year old Josh Ingle of Lenoir has worked as a volunteer for Kings Creek and High Shoals departments in the past. Now, he wants to make firefighting a career. "I was going to go to Gaston College, but I was really glad to hear about this program because it's so much closer."

Student and 22-year veteran firefighter Craig Gwaltney of Wittenburg is in his 17th year of working for Hickory Fire Department, and he plans to finish the associate degree and then work towards his bachelor's. "It's tough coming back to school and taking math after 30 years," says Gwaltney. "But, if you want to advance up the chain, you have to have the education."

Looking to the future…

Because of the demand for the program, CVCC is already planning on expanding by beginning a collaborative program with Mitchell Community College. The actual diploma will be from CVCC, but students can take electives at MCC and plans are to offer fire classes in both the Mooresville and Statesville areas.

Says Abee, "Many of the personnel in leadership positions in fire departments right now are graduates of programs like this offered in other places. They know how valuable this degree is and they want the same type of education for the people working under them now."

For more information about the CVCC Fire Protection Technology Program, call (828) 327-4058. **CF**

Regional Fire Rescue Training Coordinator G. Winfield Abee explains how the characteristics of water change as it comes through the hose nozzle based on factors such as operating pressures, nozzle design, nozzle adjustment, and the condition of the orifice. All these characteristics influence the effectiveness of a hose stream in extinguishing a fire. Pictured from left are Derrick Leonhardt, Tim Whitener and Stephen Esposito.
Photo by Ken Buckner

Photo used at the beginning of the article:
Firefighters learn proper techniques to effectively and efficiently handle emergencies such as liquefied petroleum gas
Photo by Ulrike Wright