

The Value of a Fire Protection Engineering Degree

BY CRAIG H. SHELLEY

TODAY'S CHIEFS MUST BE knowledgeable in many disciplines. They must be familiar with accounting practices and budgeting, personnel counseling, personnel issues, leadership, ethics, regulatory matters, and other legal aspects relating to the fire service, to name a few.

A chief's educational experience now must be much more extensive than in previous years. Many recruiting advertisements seek chief candidates who possess the Executive Fire Officer Designation (EFO) and the Chief Fire Officer Designation (CFOD). At a minimum, a bachelor's degree is required with a master's degree highly desirable. Some postings even require a master's degree. But, as a prospective chief, in what field of study should your degree be concentrated? As more and more fire service personnel obtain educational degrees, it may be the field of study that sets you apart during the selection process.

Many in the fire service have general business degrees. As far as fields of study are concerned, this degree will help in the performance of a chief's duties. Some people have fire service administration degrees. This type of degree may be more desirable to the selection committee evaluating a candidate.

BENEFITS OF A DEGREE

What about a fire protection engineering degree? First, let's look at what fire protection engineering is. It is the application of science and engineering principles to protect people and their environment from the destructive effects of fire. It includes the analysis of fire hazards; mitigation of fire damage by proper design, construction, arrangement, and use of building materials, structures, and industrial processes; design, installation, and maintenance of fire detection, suppression, and communications systems; and postfire investigation and analysis.

According to the Society of Fire Protection Engineers, fire protection engineers use the latest technologies to design systems that control fires, alert people to danger, and provide means for escape; evaluate buildings to pinpoint the risk of fires and the means to prevent them; conduct fire safety research on consumer products and construction materials; and investigate fires to discover how fire spreads, why protective measures failed, and what measures could have been de-

signed more effectively.¹ In summary, fire protection engineering is the practice of applying chemistry, physics, and engineering principles with additional training and knowledge of fire dynamics.

One of the buzz terms in today's business environment is "value added." Companies and fire departments are looking for additional value when hiring employees. Many chiefs in large and small departments also serve as the fire marshal or the legal authority regarding fire prevention laws and statutes. Would a fire protection engineering degree present added value? When a chief is called on to give expert testimony to a city council hearing or a court of law regarding a fire prevention matter, would a fire prevention engineering degree be helpful? Yes, it would.

Fire protection engineers are promoting safer designs for buildings that will ultimately save lives. In preparing for a terrorist attack, we are now focusing on prevention, as well as limiting the effects if an attack occurs. This includes building design modifications as well as response capabilities. Again, it would be beneficial

if the chief is familiar with both areas.

As a career path, a fire protection engineering degree can give a firefighter more options while climbing the ladder of success. The skills and education acquired during the completion of a fire protection engineering degree may be of value to the fire department and open doors of opportunity not available to the average firefighter. In today's economy, many firefighters work second jobs; this type of engineering degree may be

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useful in pursuing off-duty employment. I know a few firefighters who perform duties with a state fire marshal's office during their off tours. You must avoid conflict-of-interest regulations in this situation. Check with local ordinances or fire department regulations.

What if during your career ladder climb an injury occurs that does not allow you to perform active firefighting duties, or even forces early retirement? Most firefighters want to remain active in the fire service, but early retirement may force you away from this. With a fire protection engineering degree, you can work (physical limitations permitting) for engineering firms or insurance companies or teach fire protection engineering subjects at the local college and still retain your ties to the fire service.

Another advantage to obtaining a fire protection engineering degree is the analytical thinking the coursework develops. Engineers are trained to use analytical thinking at all times. In today's world, the chief must solve a myriad of problems daily. Sometimes, these problems are overwhelming. A strong

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analytical thinking process may be very useful in these situations. I recently was watching a television program that showcased a woman's house. She was an artist, an architect, a musician, and an engineer. She stated during the interview that she used the analytical thinking and skills obtained during her engineering career to learn how to play the piano. I am not saying that all engineers or chiefs will be able to play the piano but that analytical skills are useful in solving complex problems.

The fire protection engineering degree is one more option in degree choices for the aspiring firefighter and chief. In today's society, it may be the one item that sets one individual apart from another. It may be the completion of an advanced academic degree, analytical thinking skills, or added value to an organization. A fire protection engineering degree may be just the ticket for moving ahead in a fire department or career. ●

REFERENCE

1. Society of Fire Protection Engineers. *Profile of an FPE*. Retrieved November 11, 2006 from the World Wide Web: <http://www.sfpe.org/Profession/Profile.aspx>.

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