

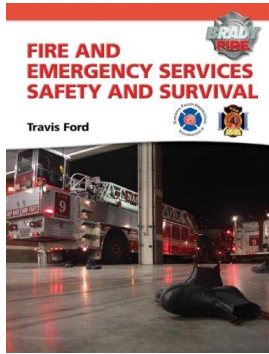
**CHAPTER 5**

***FIREFIGHTER SAFETY  
THROUGH EDUCATION AND  
CERTIFICATION***

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## Chapter 5

# FIREFIGHTER SAFETY THROUGH EDUCATION AND CERTIFICATION

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### Introduction to Chapter

Firefighting is a dangerous business. So is being a soldier. The military has adopted a concept called “*doctrine*” that is designed to provide guidance for the leaders who take individuals into harms way. For example, the United States Marine Corps has stated that “all Marines deserve to be properly equipped, properly trained and properly lead in combat.”<sup>1</sup> That is a very simple statement but it has far reaching implications. One of the most decorated soldiers from the Vietnam War was Colonel David Hackman who was quoted as saying “*practice does not make perfect – it makes permanent. We must train like we fight and we must fight like we train.*”<sup>2</sup>

Initiative 5 is directed towards the problem of reducing the number of firefighters being injured and dying in combat because they have not been adequately trained or educated. Nothing is more dangerous than to send a novice into harms way. The purpose of this chapter is to emphasize why it is important for every firefighter, regardless of where they are serving, rank, assignment, size of department, or any other characteristic of their exposure to emergency services to be trained and certified to meet a high level of proficiency.

This is not a new topic of discussion. It has been going on for many years. Unfortunately there are individuals who do not believe in the doctrine of firefighter safety. Some of these are entry level individuals and some of them are people in leadership roles. This chapter will explore what mechanisms already exist to assure proper training. The notion that firefighting is inherently dangerous and cannot be made safer ignores the fact that almost all other high risk occupancies have established minimum standards and enforce them without prejudice. Our brethren in law enforcement, for example, would never think of allowing an individual to carry a weapon and engage in the use of that weapon in applying deadly force without meeting minimum qualifications. How can we justify allowing anyone to fight fire and to enter a burning building without meeting minimum qualifications also.

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<sup>1</sup> Marine Corps Combat Doctrine

<sup>2</sup> Hackman, David, About Face, Publisher Date

We have a nationally recognized system of training and education for firefighters. It is not universally mandated. It is entirely dependent at this point upon individuals, fire service agencies, fire service organizations and other parties adopting and implementing its provisions. Many organizations have resisted the acceptance of these standards. This resistance is eroding rapidly in the face of the need to eliminate the tragic consequences of firefighters being killed and injured due to a lack of knowledge. This chapter will encourage both the adoption and the continued commitment to a host of standardized systems that will encompass every rank from the entry level volunteer firefighter up to and including the chief of the department.

The existing system provides a progression of opportunities for those in the emergency services field to obtain knowledge, skills and abilities (KSAs) that will be applicable throughout their entire career. It is important for all participants in the fire and emergency services field to not only understand the implications of these opportunities but to have knowledge of the past and the present state-of-the-art.

### ***Overview of the Need for Certification in the Fire Service***

Webster says that a profession is “a calling requiring specialized knowledge and sometimes long and intensive academic preparation.”<sup>3</sup> A **professional**, therefore, is “a person engaged in one of the learned professions who conforms to the technical or ethical standards of that **profession**.” This raises the question as to whether or not a person engaged in the fire service is, by definition, in possession of specialized knowledge, and whether or not becoming a firefighter involves long and intensive academic preparation. This chapter will provide some definition of that distinction. It will also provide the reader with an explanation as to why they should be a strong supporter of these processes over the duration of their career.

The fact that the human race discovered how fire could be used to prepare food, provide comfort and help in the production of goods goes far into the distant past of civilization. But it did not result in the development of anyone who was a professional firefighter for millennia.

The ability to actually combat an unfriendly fire was very limited in the dawn of the development of the first human settlements. Essentially fire combat was a truly personal experience. No doubt early versions of the “firefighter” were ordinary human beings being pressured into service by a set of accidental conditions.

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<sup>3</sup> Webster’s Dictionary

## Origins of Firefighting

The first institutionalized effort to create a firefighter class that has been documented by history was the creation of the Roman Fire Brigade in 64AD. When that organization was created there was the identification of special task assignments such as hook person, pump operator, nozzlemen, etc. In general, however, for over 1,500 years firefighting was not a profession. It was more of a hobby or community obligation.

A brief visit to the events that lead to the creation of the American Fire Service requires a review of the fire service in Europe. While most firefighters recognize Benjamin Franklin as the Father of the American Fire Service, most of the initial concepts of firefighting in this country were based upon knowledge brought here by European immigrants. That relationship existed from the 1600s up to and including the modern era in the 1800s.

## Industrialization Changes the Fire Service

What began to change was the industrialization of the world. Starting about 1850, the idea that firefighting required a more structured response for those engaging in the practice was initiated. In most industrialized nations firefighting started to be a full time job opportunity about 1860. Among the first countries to make the move was the United Kingdom. Starting with Fire Chief James Braidwood who served in Glasgow, and later in London the creation of the job of being a firefighter started with the development of some criterion. James Braidwood had been selected as Fire Chief at the early age of only twenty-three years old. He came to the job in the wake of several disastrous fires that occurred in Edinburgh. His appointment as Master of the Fire Engines began in October of 1824. With his particularly keen interest in the fire service, combined with his inventiveness, initiative, shrewdness, and energy, he soon began to make his mark.<sup>4</sup>

One of his first actions after achieving the rank of “Firemaster” was to choose a particular type of person to be a firefighter in this brigade. He selected only slaters, carpenters, masons, plumbers, and smiths. He explained his rationale as follows:

*“Men selected from these five trades are also more robust in body, and better able to endure the extremes of heat, cold, wet, and fatigue, to which firemen are so frequently exposed, than men engaged in more sedentary occupations.”<sup>5</sup>*

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<sup>4</sup> Blackstones History of the British Fire Service

<sup>5</sup> Ibid

Further, his concept of hiring firemen was limited to selecting individuals who were between the ages of seventeen and twenty-five because he believed that age group was more readily trained than older people that had fixed work habits.

Braidwood published *On the Construction of Fire Engines and Apparatus, the Training of Firemen and the Method of Proceeding in Cases of Fire* in 1830. Based on that book, Braidwood instituted a course of instruction for his firefighters. Braidwood received requests for the book from all over the world after it was published.

Braidwood was not just an educated theorist. He held personal convictions about the training of firefighters that were based upon his own experiences. In one fire, he personally saved nine people, dragging and carrying them to safety. Perhaps for that reason, Braidwood felt that physical fitness was an essential part of the firefighter's needed skills. Braidwood proposed that for the first time in history, firemen<sup>6</sup> were actually put through a course of gymnastics to reach and maintain peak fitness. As Firemaster, Braidwood was known to be a taskmaster. He had been witness to numerous conflagrations and the subsequent failure of firefighters to be equal to the task. He drilled his firefighters every Wednesday at four o'clock in the morning. He explained his rationale by stating:

*"The mornings too, at this early hour, are dark for more than half the year, and thus, the firemen are thus accustomed to work by torch-light, and sometimes without any whatever, except for the public lamps which are then burning. And, as most fires happen in the night, the advantage of drilling in the dark must be sufficiently obvious."*<sup>7</sup>

Braidwood was then appointed as the Fire Chief of London in 1833. Interestingly, by then had changed his mind about who made the best firefighters.

He then stated:

*"Seaman are to be preferred, as they are taught to obey orders, and the night and day watches and the uncertainty of the occupation are more similar to their former habits, than those of other men of the same rank in life."*<sup>8</sup>

The end of Braidwood's career in the London Fire Establishment was as remarkable as its beginning. Like many other firefighters who followed in his

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<sup>6</sup> The term here is not regarded as gender bias at the time.

<sup>7</sup> Blackstone History of the British Fire Service, 1957

<sup>8</sup> Blackstone, 1957

footsteps, his life was cut short by the very event that he had worked so hard to eliminate. James Braidwood was killed at the “Great Fire of Toohey Street,” Saturday, June 22, 1861, at approximately five o’clock in the evening. A wall collapsed on him while he was inspecting for the safety of one of his crews. He had led the London Fire Establishment for thirty-eight years. Fortunately, the course of action set in motion by Braidwood did not die with him. He was ultimately succeeded by another person of equal mental and physical stamina – Sir Eyre Massey-Shaw.

### **Sir Eyre Massey-Shaw**

Sir Eyre Massey-Shaw was appointed as Fire Chief of the London Fire Brigade in 1873. Massey-Shaw expanded Braidwood’s theories about fire protection, including the concept of the requirements for entry to the service. He too focused on seamen for his recruits.

*“A smart man, who has served at sea for a few years, and has a taste for the work of a fireman, can be brought forward for duty within an average period of about six or eight weeks; a man equally smart, but without the advantage of a seaman’s training, may possibly be brought forward within about as many months, but even at the end of that time he would hardly be as expert as a seaman in climbing and the use of ropes.”<sup>9</sup>*

Massey-Shaw’s requirements for entrance into the Brigade included requirements that the candidates had to be less than twenty-five years old, they had to have a chest measurement that exceeded thirty-seven inches, be at least five feet five inches in height, and they had to be able to read and write. Further, they had to be able to raise a fire escape ladder with the tackle reversed. They had to pass a physical examination by a physician. All appointments were tentative and Massey-Shaw imposed a three-month probation period on all new candidates.

After the selection of the candidates, they had to complete basic training. Massey-Shaw thoroughly documented his efforts at providing a “curriculum” for the professional firefighter. In his textbook, published in 1876, Massey-Shaw stated:

*“From the remotest periods of antiquity to the present time the business of extinguishing fires has attracted a certain amount of attention: but it is a curious fact, that, even now, there is so little method in it, that it is a very rare circumstance to find any two countries, or even two cities in one country, adopting the same*

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<sup>9</sup> Massey-Shaw, 1876, p. 305

*means or calling their appliances by the same names”<sup>10</sup>*

Massey-Shaw did not hesitate to state that he felt his methods were the best. In his book, he clearly indicated that he believed his book to be the first and only comprehensive study of the fireman’s occupation.

Under Massey-Shaw’s administration, the London Fire Brigade had also moved from a partially volunteer operation to the adoption of full-time paid firefighters. This was created to a large degree by the need to have skilled firemen combat large fires when they were in their first few moments of origin, instead of waiting until they had reached block-wide conflagrations. Sir Massey-Shaw expressed this clearly in statements such as follows:

*“The importance which I attach to a sound system of training will probably be understood when I state my conviction, founded on what appears to me the clearest and most positive evidence, that some of the greatest losses by fire, which the world has ever experienced, have been owing to want of skill on the part of firemen. It is true that want of discipline may justly be credited with a considerable portion of the blame, but, as a practical man, I do not hesitate to assert that, where there is no skill, discipline becomes almost impossible and is, at least under such circumstances, of very little use, so far as the extinguishing of the fire is concerned”<sup>11</sup>.*

His belief in formal training was proven when he established London’s first fire training academy. The requirements were as follows:

*“Each on appointment joins this class and learns the use and manipulation of all the appliances, as explained in the foregoing pages. At the same time, he lives in the state, and by degrees is taught the general working of the brigade; but during this period never attends a fire, except on an emergency, and then only under the personal charge of his instructors. Nothing is so destructive of sound education in this way as permitting men to attend fires before they know how to handle the appliances properly, and the*

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<sup>10</sup> Fire Protection, a Complete Manual of the Organization, Discipline and General Workings of the Fire Brigade of London, published in 1876

<sup>11</sup> IBID Page 306



*youngest hands are therefore brought out as little as possible.”<sup>12</sup>*

The seminal concept of training replacing sheer bravery and stress was continued in Massey-Shaw’s observation that:

*“It may perhaps be said that great numerical strength will make up for deficiency of skill and knowledge; and this may, no doubt, be to some extent correct; at least it appears to be the theory established in many places; but I am inclined to believe that, for dealing with great emergencies, no amount of numerical strength, even when combined with discipline, can compensate for the absence of skill and knowledge, and on this account, I consider a proper system of training, before attending fires, the only true method for making men real firemen.”<sup>13</sup>*

Massey-Shaw’s system worked. His fire academy was originally established using a lead instructor and two assistant instructors. During the initial status of the recruits’ training, they were constantly evaluated. Those who were unfit were released. Massey-Shaw’s system was also dependent upon practical reinforcement of the knowledge gained in the academy. Massey-Shaw directed that:

*“When a man is pronounced competent by the instructor, he is removed from the drill class, and is posted to a station, where he receives further training and instruction from the officer in charge, who entrusts him, at first, with work of the simplest kind, and by degrees, as he gains experience, with all the duties of his position.”<sup>14</sup>*

In accomplishing all this organizational work, Massey-Shaw made it quite clear that he hoped that his efforts would not have to be “reinvented” by someone else. In the closing section of his introduction to his textbook, he stated:

*“In conclusion, I need not hesitate to say that, if such a work as this had been published some 16 years ago, it would have saved me much labor; and I therefore have every confidence that it will be of service to all who are interested in the preservation of life and property, and especially to those who have devoted themselves to the practical work of*

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<sup>12</sup> IBID Page 305

<sup>13</sup> IBID Page 306

<sup>14</sup> IBID Page 305



*extinguishing fires and who, whether their claim be conceited or not, consider, when my fellow laborers and myself, that the business, if properly studied and understood, is work being regarded as a profession.”<sup>15</sup>*

Clearly, Massy Shaw recognized that firefighting was a dangerous occupation. While he favored hiring sailors or former military personnel because he wanted to have personnel accustomed to working under stressful conditions for long periods of time, the process in the United States was just starting to become as formal. In 1873, Eyre Massey Shaw wrote this after visiting several fire departments in the United States:

*“When I was in America it struck me forcibly that although most of the chiefs were intelligent and zealous in their work, not one that I met even made the pretension to the kind of professional knowledge, which I consider so essential. Indeed one went so far as to say that the only way to learn the business of a fireman was to go to fires . . . a statement about as monstrous and as contrary to reason as if he said that the only way to become a surgeon would be to commence cutting off limbs, without any knowledge of anatomy or of the implements required.*

*There is no such short cut to proficiency in any profession, and the day will come when your fellow countrymen will be obliged to open their eyes to the fact that if a man learns the business of a fireman only by attending fires, he must of necessity learn it badly, and that even what he does pick up and may seem to know, he will know imperfectly, and be incapable of imparting to others.*

*I consider the business of a fireman a regular profession requiring previous study and training as other professions do; and I am convinced that where study and training are omitted, and men are pitch forked into the practical work without preparation, the fire department will never be capable of dealing satisfactorily with great emergencies.”<sup>16</sup>*

## **Creation of Paid Fire Departments**

The path to converting firefighting from a random opportunistic vocation into a full time job was then paralleled in this country. The first paid fire departments were created right about the time of the Civil War. One of the motivating factors in the creation of these departments was the acceptance of an advanced technology; the steam operated fire pumper. Powerful, but dangerous, the use of the steamer

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<sup>15</sup> IBID Page 187

<sup>16</sup> IBID Page 110-111

introduced an increasing emphasis on being properly trained and evaluated. This resulted in the creation of training schools or “academies”,

As early as 1880, recruit academies emerged at numerous locations around the US. There was a tremendous amount of energy devoted to exchanging information on basics and advanced skill sets. Yet, there was no “standard” for the performance of a firefighter.

For over 50 years, recruit academies borrowed both text material and curriculums as the state-of-the-art advanced. The same five decades saw significant changes occur in the world of fire protection technology. Automatic sprinklers were developed. The first fire alarm systems were created. Americans suffered catastrophic fires such as the Chicago Fire, Portland Maine, and the Peshtigo Fire.

Then the fire season of 1910 occurred. That one year was a year that finally put a spotlight on the scope and breadth of both fire protection and firefighting. In that one year the United States experienced a loss of 35 firefighters in a structural collapse in Chicago. It was declared “The Year of the Fires” because of so many deaths of both civilians and firefighters alike. The infamous “Triangle Shirtwaist Fire” occurred.

### **The Creation of Trade Analysis for Fire Service Occupation**

In that same timeframe there was a young fire officer in the Los Angeles Fire Department that was an observer of all of these tragedies. While no record exists regarding his personal response to the events there is evidence he was observing the consequences. Fire Chief Ralph J. Scott who had been elected President of the International Association of Fire Chiefs wrote a letter to the Office of Vocational Education in Washington DC. He offered the opinion that there should be a set of published standards for training of firefighters.

As a result of that communication the Los Angeles Fire Department developed a document called “The Trade Analysis of the Fire Engineering”.<sup>17</sup> This document was adopted by the Federal Government. It quickly became a source of reference for the development of training materials. The era was the 1930’s when this document began to be distributed through the network of those advocating improvements in firefighting training. The International Fire Service Training Association (IFSTA) began to publish an increasingly diverse number of textbooks.

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<sup>17</sup> Gowell, Tebbetts, Baker, Trade Analysis of Fire Engineering, Los Angeles Fire Department, 1932

## ***Wingspread Conference***

In 1966, the Johnson Foundation brought together a group of fire service leaders in a brainstorming session to talk about the future of the fire service. This group would continue to meet every ten years to monitor and assess the accomplishment of a variety of improvements in this profession. At the very first meeting the group clearly recognized the need for there to be a widespread acceptance of an improvement in the fire services use of training and education. This had been suggested by the statements made in the “Wingspread” series of visionary declarations.<sup>18</sup>

The first was the statement that “Professional status begins with education.” The second was “the scope, degree and depth of the educational requirements for efficient functioning of the fire service must be examined”.

Wingspread statement 6 suggested that there were criterion for achieving this goal:

“Professional Status begins with Education. The Gordon-Howell Report suggests four criteria for defining a “Profession

1. A profession should rest upon a systemic body of knowledge of substantial intellectual content and on the development of personal skill in the application of this knowledge to specific cases
2. It must set up standards of professional conduct which take precedence over the goal of personal gain.
3. It should have an association of members, among whose functions are the enforcement of standards, the advancement and dissemination of knowledge.
4. It should prescribe ways – controlled in some degree by the members of the professional association – of entering the profession by meeting certain minimum standards of training and competence.”<sup>19</sup>

### **The Role of the IAFF in Creating the Standards**

In that same year (1966), the International Association of Firefighters passed Resolution 111-1966. This Resolution, authored by Ernest A. Emerson and Alcus Greer from the State of Texas, called for the setting up of standards for areas such as recruiting and training in the fire service. (Emerson was later to become the State Fire Marshal in Texas.) The IAFF staff was instructed to prepare a booklet that included a recruiting program, a training program, and a recommended associate in arts and bachelor’s degree program. The call was

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<sup>18</sup> Wingspread Conference, 1966, The Johnson Foundation, Racine Wisconsin

<sup>19</sup> Silk, Leonard, S., *The Education of Businessmen*, Committee for Economic Development, No 11, p. 9, New York, 1960

out for improved training opportunities and more importantly the establishment of some standard criteria to measure a firefighter's competency.

Emmett Cox, an eminent member of the fire service, was called out of retirement and asked to direct this important study committee. He did so with a number of other committee members, including Carl McCoy and the Oklahoma State University International Fire Service Training Association.

What is important now is what this all means for the current generation of firefighters. The consequence of this historical evolution was simple. Firefighting had gone from a social function where neighbors helped neighbors to a specific set of skills and knowledge that are basic to a person being able to operate effectively and efficiently. This evolution introduced the need to utilize specific terms and a vocabulary in order to describe how this process was to be utilized by the fire service. The following paragraphs describe some basic terminology that is now part of the process.

### ***Defining the Terms to be Used***

Adopting a minimum set of standards was fundamental to establishing a competency. There are levels that are used by society to provide a framework for providing recognition of the use of those standards. These concepts include:

- Certification
- Licensure
- Credentialing
- Professional Recognition (or Designation)
- Accreditation

All five have been adopted by the fire service to recognize various levels of achievement and ability to perform. More importantly, the process of providing these forms of recognition for a person meeting specific standards for job performance is an integrated part of assuring firefighting safety.

The relationship between how a person can be "*certified*" or "*licensed*" to perform provide the basis for the contention. While anyone can read a book or attend a class to become familiar with a set of standards, that person needs to be evaluated.

#### **Certification**

"*Certification*" refers to the confirmation of certain characteristics of a person, that is often, but not always, achieved after some form of external review, education, or assessment by a third party. One of the most common types of certification in modern society is a certification that is linked to a specific

vocation. This means a person is certified as being able to competently complete a job or task, usually by the passing of an examination.

There are two general types of certification: some are valid for an entire lifetime, once the exam is passed. Others require a person to be recertified again after a certain period of time. A good example of this might be the difference between a firefighter certification and an emergency medical technician certification. Some firefighter certifications are for a lifetime but very few EMS certifications are that generous. Other examples might include the continuing education requirements in the field of hazardous materials or very specialized physical skill sets such as dive rescue or high angle rescue. Certifications can differ within a profession by the level or specific area of expertise they refer to. In the case of the fire service *being certified* usually relates to basic firefighting or emergency medical services skills.

Being certified at the Fire Fighter I level is not the same as being certified at the Fire Officer III Level. Levels of certification usually reflect levels of complexity and increased skill requirements. *Certification* does not refer to the state of legally being able to practice or work in a profession because of a specific skill set.

## **Licensure**

That is called "*licensure*". Licensure refers to the granting of a license, which gives a person 'permission to practice.' Such licenses are usually issued in order to regulate some activity that is deemed to be dangerous or a threat to the person or the public or which involves a high level of specialized skill. In some states for example a person is certified to engage in EMS activity, in other states a person must be licensed to engage in EMS activity. In both cases these terms define the level of activity that is permitted.

Usually, licensure is administered by a governmental entity for public protection purposes and certification is issued by a professional association. However, they are similar in that they both require the demonstration of a certain level of knowledge, skill or ability.

In the case of certain occupations and professions, licensing is often granted through a professional body or a licensing board composed of advanced practitioners who oversee the applications for licenses. This often involves accredited training and examinations, but varies a great deal for different activities.

One commonality of both processes is that certification and licensure are conducted as part of a state's legal authority, rather than the federal government. Sometimes the term "*registration*" is used to indicate that a person has the skill set to work in a particular profession or to obtain a special privilege such as drive an emergency vehicle or treat a person for an injury. One of the best reasons for

these practices is to ensure that the public will not be harmed by the incompetence of the practitioners. Moreover, it might serve to restrict parties that are not qualified to engage in dangerous tasks or assignments. Licensure is similar to professional certification, and sometimes synonymous; however, certification is an employment qualification and not a legal requirement for practicing a profession.

## **Credentialing**

“*Credentialing*” is the process of formal recognition and/or technical competency and performance by evaluating and monitoring adherence to an applicable professional standard for direct or peer review. In addition, credentialing verifies an individual by investigation and observation. It defines a scope of practice that he or she may provide. These criteria must be directly related to quality of care.

One of the more critical aspects of protecting the integrity of our system is the training, certification and credentialing of instructors. While there is no one system nationwide that encompasses all instructor credential under one package there are some elements that are fairly consistent. The first is the use of a standard for instructor qualifications. The second is a process of the state through the fire marshals office or through the colleges and universities providing recognition to an individual who meets these standards.

The credentialing of instructors is the most important part of the integrity of this process because it assures accountability for those who are conducting the learning experience for people attempting to become certified. No compromise can be accepted in assuring that instructors stick to the standards and teach to the designated curriculum.

In some states instructors are given designations that are tiered, i.e. basic instructors, advanced instructor, etc. Some states have very specific credentials required for a person who is a teacher of teachers.

## **Professional Recognition and/or Designation**

The term “professional recognition and designation” is recent addition to the pedigree of career development processes. These are processes that are based upon examination of a person’s life experience that includes both certification and licensure, but is based upon the notion of providing a capstone to the training and education system for a person serving in top management positions.

One example of such a system is the professional designation (recognition) system operated by the Center for Public Safety Excellence for Fire Chief Officers. This system is also closely linked to the idea of a professional development program that was developed and implemented by the International Association of Fire Chiefs Professional Development Committee.

## **Accreditation**

The last term that requires definition is “*accreditation*.” The term, accredit means to give official authorization to or approval of a process of delivering programs.



The term accredit is a form of recognizing that an organization is conforming to a standard that qualify its students or graduates for recognition. Accredited is not the same as certify. When organizations are accredited it means that the institution itself has the ability to certify individuals.

In the context of this definition, there are standards, courses of instruction, testing processes, issuance of certificates and a host of other activities. An accredited organization has been authorized by someone to deliver programs. In the training world this is most often the organizations that have been created to provide oversight; Pro Board and IFSAAC. In the cases of colleges and universities it depends on the courses being offered and the area of the country. These organizations are generally groups like the Western Association of Colleges (WASCO).

### ***Gaining Recognition of the Standards***

The opposite of professional is amateur or, as it is sometimes disparagingly phrased, "rank amateur." Sometimes an amateur can perform as well or better than a professional, but this tends to be an exception. Therefore, in many fields a person must overcome a series of barriers before gaining recognition as a professional.

#### **Oversight to the Process**

The period of the evolution of standards and the development of recognition systems, there were numerous efforts to maintain a sense of standardization to the process. For example, there was an organization created called the Joint Council of Fire Service Organizations. While these organizations essentially did not all agree, they did form the basis for the creation of a system.

**Figure 1 – Pro Board Logo**



#### **National Professional Qualification System**

In 1972 the Joint Council for Fire Service Organizations founded the National Professional Qualifications System (NPQS). A nine member board was

established by the Joint council to oversee the more formalized process of getting standards published and distributed to all fire service organizations.

Notably, up to the point in this chapter the term professional has not been used in describing most of the previous activities. There is a desire to call the fire service a profession by its members. But the subtle differences of being called a professional and being recognized as one has not yet been achieved.

In order to have a set of current standards for use by the system, the Pro Board, as they were soon to be called, asked the NFPA to charge their committee process with the responsibility to create a set of standards. This work, to a large degree, was based upon the previous documentation described in the history portions of this chapter. More importantly it was vetted through a contemporary process of involvement by people that were actually doing the jobs themselves.

### **NFPA 1001**

The consensus process resulted in the first standard being made available in 1974. That Standard was NFPA 1001. Since that time, there have been an entire series of professional standards developed that matches up with the career development processes that have been evolving in the fire service. The following table illustrates the current set of standards within the NFPA series.

**Figure 2 – Table of NFPA Standards**

NFPA Standard Number	Title
NFPA 1000	Standard for Fire Service Professional Qualifications Accreditation and Certification Systems
NFPA 1001	Standard for Firefighter Professional Qualifications
NFPA 1002	Standard for Fire Apparatus Driver/Operator Professional Qualifications
NFPA 1003	Standard for Airport Firefighter Professional Qualifications
NFPA 1005	Standard for Professional Qualifications for Marine Firefighting for Land Based Firefighters
NFPA 1006	Standard for Technical rescuer Professional Qualifications

NFPA Standard Number	Title
NFPA 1021	Standard for Fire Officer Professional Qualifications
NFPA 1026	Standard for Incident Management Personnel Professional Qualifications
NFPA 1031	Standard for Fire Inspector and Plan Examiner
NFPA 1033	Standard for Professional Qualifications for Fire Investigator
NFPA 1035	Standard for Professional Qualifications for Public Fire and Life Safety Educator
NFPA 1037	Standard for Professional Qualifications for Fire Marshal
NFPA 1041	Standard for Fire Service Instructor Professional Qualifications
NFPA 1051	Standard for Wildland Firefighter Professional Qualifications
NFPA 1061	Standard for Professional Qualifications for Public Safety Telecommunicator
NFPA 1071	Standard for Emergency Vehicle Technician Professional Qualifications
NFPA 1081	Standard for Industrial Fire Brigade Member Professional Qualifications

The Joint Council of Fire Service Organizations was eventually dissolved. In July of 1990 the NBFSPQ was incorporated as a free standing organization as a successor to the Joint Council. Today the NFDQB provides 72 levels of certification using 16 separate NFPA Standards.

Figure 3 – IFSAC Logo



### **International Fire Service Accreditation Congress**

A second organization has played a role in the development of this process. They are known as the International Fire Service Accreditation Congress (IFSAC). This entity not only accredits training systems, but also accredits higher education institutions. Their organization is organized in a similar fashion of the Pro Board in that it has a Board of Directors and a process whereby the organization seeking accreditation must report their processes and structure for evaluation.

State fire training systems are using these two different “coordination” systems depending upon their background and their commitment to the process. Both operations are based upon the same concept. They accredit entities that provide certification. They do not publish standards, nor do they deliver courses of instruction. They conduct assessments of the state delivery systems and provide third party validation to that system. Basically they want to make sure that the system does what they say it does. In other words, they validate the process which allows a person receiving a certificate to do so with credibility.

### **Changes in Standards**

What continues to make the standard setting process and the importance of certification programs relevant to firefighter safety is the ongoing effort of keeping the standards current to keep certification matched to job requirements in the fire service.

Two examples are demonstrated by the increasing levels of sophistication needed in the field of emergency medical services and hazardous materials. The development and publications of standards dealing with both of these areas are as much for the safety of the practitioner as they are for rendering a specific scenario safe for a patient or property owner. The stakes keep getting higher and higher for those who are responding in this area of specialization. These

examples are also joined by the need of firefighters to perform in confined space rescue, high angle, or whitewater rescue work, along with many other types of emergencies that are becoming increasingly complicated. There is almost always need for new technology in modern society. A good example of this might include coping with alternative fueled vehicles, responding to solar energy installations, and dealing with outbreaks of communicable diseases. There simply is no room left for an inadequately trained person to be the one to confront these types of emergencies. Standards must almost always be modified and improved to cope with changes.

That doesn't mean that everyone will be that well prepared. Not every fire organization uses minimum standards. Not every organization requires certification or licensure. Many organizations are under the impression that whatever training is offered is sufficient for every person. They lack a sense of appreciation for the importance of this process.

Advocates of certification in process point to one fact that training and education of individual firefighters is a critical aspect of firefighter safety and should be a part of minimum requirements of all fire service organizations.

Lastly, the idea of using certification as a means of discriminating between those that should be allowed to be in harms way, versus those that should be retrained is not liked to strictly career based departments. There is ample proof that the process of recognizing minimum standards or being used by volunteer organizations also. Fire, a mass casualty event, communicable disease and the adverse effects of hazardous materials do not recognize the distinction between career and volunteer firefighters.

The debate about whether or not the fire service has achieved professionalism has not been resolved by the creation of certification systems. It has continued on based upon another aspect of achieving a high level of competency: education.

## **Community Colleges**

Two events provided the motivation for community colleges to get more engaged in firefighter training and education. The first of these was research by Don Favreau to examine the number of community colleges and their vocational education training programs that were providing assistance to fire departments in the 1960s. Many community colleges began to embrace the idea of using the community college funding mechanism to do basic recruit academies and to develop two year AA degree programs as a foundation for fire officer development. The second influence was the GI Benefit program that was expanded right after the Korean War. That made many individuals eligible for benefits for education compensation through the 1960s and 1970s. The

development of recruit academies that were linked with community colleges provided a natural channel to guide firefighters into the educational arena.

## **Higher Education**

Doctor Dennis O’Niel, the Superintendent of the National Fire Academy has questioned why the fire service has not been given the same consideration of other endeavors such as doctors and lawyers. He expressed it as:

*“Then why aren’t we given the professional status of physicians and nurses, architects and engineers, and attorneys and accountants? Well, those professions have some things that the Fire and Emergency Services do not yet have; there are a few more steps.”<sup>20</sup>*

The process of increasing the educational requirements for those who are seeking to raise the level of professionalism is still under development. In many parts of the country a four year degree and graduate level programs have been developed to expand the body of knowledge. These have included the development of Bachelor Degree programs that are in residence and the creation of an open learning program sponsored by the National Fire Academy.

These upper division programs are primarily aimed at those who aspire to management and leadership roles. The body of knowledge encompasses the type of topics that would parallel the same level of education that would be required for a public administration degree.

These upper division and graduate level programs are continuing to expand. As a result this has raised the question of how to coordinate that effort at the national level to bring about a more stable and uniformly recognized higher education system.

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<sup>20</sup> Doctor Denis Oniel, Status for the Fire and Emergency Services through a common system of training and education

## Fire and Emergency Service Higher Education Summit (FESHE)

Figure 4 – National Professional Development Mode



The United States Fire Administrations National Fire Academy has recognized that colleges and State Fire Service Training Systems are among the critical elements of professional education. In June, 2002 over 100 representatives from colleges across the nation convened in Emmitsburg to develop a model curriculum for fire science programs. The USFA/NFA has been working to coordinate the two and four year academic fire and emergency medical service (EMS) degree programs. They have established an organization of post-secondary institutions to promote higher education and to enhance the recognition of fire and emergency services as a profession. This has included working with these schools of higher education to encourage them to:

- Develop a model curriculum
- Seek ways, when and where appropriate, to award college credit for certification training.
- Seek partnerships with State training systems to explore ways for State training systems to include college courses as part of certification requirements.
- This coordination is designed to build a smooth transition from the certification environment which is basically skills based and the education environment which is knowledge based.

Nothing in this plan changes what these organizations do; in fact, this process actually strengthens their standing. With a national, reciprocal system of training and education, these organizations become the outside agency that assures standards competency; the medical, law or nursing board (if you will) for the Fire and Emergency Services.

*“Professional standards are particularly important in high-risk industries such as the fire service. We must share the same values*



*if we are to evolve further as a profession. The widespread adoption of the accreditation and certification movement .....will go far in ensuring that this trend continues to the benefit of each one of us.”<sup>21</sup>*

## **Current Trends and Patterns within the Fire Service**

Throughout most of the history of this professional development process, participation in both training and education has been voluntary. Early on, leaders from both labor and management invested in the systems without having any real expectation of a direct benefit. However, the trend and pattern in society overall and in the fire service specifically is to continue to raise the bar on setting minimum requirements that will become mandatory. Society in general has recognized the need for minimum standards for many agencies that are part of the fire service world. Specifically the medical field has maintained a very tight rein on the idea that in order to function as a person providing emergency medical services you must meet mandatory requirements. Law enforcement has seen a significant increase in its emphasis on this process also.

While the fire service has almost always been a first responder for medical emergencies, an increased emphasis on the level of emergency medical services is relatively new. At the end of the Vietnam War the medical profession recognized that an improved level of intervention in the field was provided by military medics. There were those that suggested that the fire service might be the best provider for the application of paramedicine in local government. The pilot program that initiated this process was in Los Angeles County California. Many individuals can trace their interest to the fire service to a television series that was entitled “Emergency” which saw two young paramedics Gage and DeSoto in the process of saving lives by responding to medical emergencies. The image of the firefighter as a medical health professional was initiated at that time.

By definition, the health profession is one in which a person exercises skill or judgment or provides a service related to:

- A. The preservation or improvement of the health of individuals, or
- B. The treatment or care of individuals who are injured, sick, disabled, or infirmed

The transition of emergency medical services into the fire service was not as seamless as many people seem to recall. In the first place, there were those who did not believe that firefighters in general had the knowledge, skills and abilities to carry out sophisticated medical care. That prejudice was instantly overcome and the fire service began to be part of the first responders who

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<sup>21</sup> National Board on Fire Service Professional Qualifications, website home page.

worked side by side with emergency rooms and physicians to raise the level of possibility that a person will survive an incident in the field.

The significance of this is that it added emphasis on the whole idea on being certified to do a job. It is pretty hard to argue the case that you have to be certified to do CPR but you don't have to be certified to enter a burning building wearing protective clothing. Getting into the health profession provided one of the linchpins to the fire service becoming authorized to provide a discrete level of health care.

## **Hazardous Materials**

The fire service has always been confronted with problems associated with hazardous materials. If you review the history books, it was not uncommon for hazardous materials to be involved in many events resulting in firefighter fatalities. Over the last two decades, it has not been adequate to respond to hazardous materials events without minimum levels of training. Beginning with the creation of NFPA 451 there has been a growing recognition that those that have to deal with specialties need to be better qualified to perform higher levels of sophisticated action at the scene of an emergency. This has resulted in the concept of "levels of training" that often fall outside of standard curriculum for basic firefighting.

This is especially true in the field of hazardous materials. This was perhaps the first area of specialization that recognized the concept that there are the levels of:

- A. Awareness
- B. Operations
- C. Specialization

The hazardous materials response process has started to incorporate these levels that insure that only qualified personnel were allowed to perform certain sophisticated processes. For example, those individuals who are placed into the highest level of protective clothing and sent into a hot zone for hazardous materials must have a much higher level of training than those that respond to a small spill or leak in which a firefighter's normal personal protective equipment (PPE) is adequately protected.

As this concept has developed, areas of specialization have began to emerge that are directly related to the danger of performing actions at the scene of an emergency.

## **Other Areas of Specialization**

A parallel process to position related training i.e. firefighter, apparatus operator and fire officer, has been the development of high risk specialties. An excellent

example of these might be high-angle rescue, swift water, or confined space. The basis for certification in these programs is to assure that individuals are adequately trained to use the tools and technology safely. This was mentioned earlier in this chapter but is being reinforced here because it is likely to be very much a part of the future. As risks become more complicated, the need for specialization is likely to expand not contract.

### **Organizational Commitment**

More and more fire agencies are requiring basic entry level firefighters to be certified. Over the last couple of decades many job flyers and position descriptions have been revised to now include both minimal training and educational requirements and requirements for promotion. These processes will likely continue to evolve in the direction of requiring more and more evidence of the certification process.

### **Human Resource Decisions**

The manner in which many of these changes are being adopted is through the human resources departments for firefighting organizations. As the availability of certification courses has increased more communities have established these as criterion for job selection. This same phenomenon is taking place in upward mobility within organizations in that certification as apparatus operators and fire officers have now been incorporated by human resources departments as part of the minimum requirements for promotion.

### **Job requirements**

Those departments that have access to comprehensive training and education systems have tended to adopted minimum job requirements at the recruit level faster than those that lack access to such delivery systems. The result is that it is becoming increasingly difficult to get hired and/or promoted without meeting these minimum requirements.

### **Educational Incentive Programs**

Both the training and education systems have been supported by some departments through the development of educational incentive programs. In this set of circumstances, individuals are financially rewarded for maintaining certain levels of certification. Much of the definition of this phenomenon is reflected in labor management agreements. The specifics in many cases are contained in memorandums of understanding.

## **Continuing Education Unit (CEU)**

The term continuing education unit is used to describe the need in some programs to re-visit the training domain and upgrade a skill set. Candidly, the concept of the CEU is viewed by some as an inconvenience and by others as a necessity. Essentially a CEU is a requirement in a certification system that people spend a number of hours or perform a certain set of skills to demonstrate currency in whatever they were certified for in the first place. A good example of the CEU concept can be found in the field of emergency medicine and/or hazardous materials.

Training providers often grant CEUs on the basis of a variety of delivery systems. For example, some CEUs require an instructor of record to actually observe something being done, such as CPR. Others may allow a person to obtain CEUs by using long distance learning which may include the use of self-paced text and the internet. Regardless of whether it requires face to face exposure, seat time or completing a check off list, the idea behind the CEU is to assure that a person does not undergo skills degradation in an area in which those skills must be critically honed to perform in the field.

## ***Qualification Systems***

An emerging component of training and education that links these concepts with experience is the notion that there are minimum qualifications to be allowed to supervise people in the field. The National Interagency Incident Management System is an example of this concept. At one point in time if you held the rank of an officer in a specific department it was assumed you knew what you were doing. A series of lessons learned from major fires has resulted in the fire service now recognizing the need to establish minimum qualifications to allow a person to supervise emergency operations.<sup>22</sup>

At this time, the incident qualification system is focused on wildland. But the influence of natural hazards on major mobilization and the increased emphasis on interoperability such as using rescue teams from one state to assist in another and the impact of terrorism is placing more emphasis on being properly credentialed.

## **Fire Prevention Qualification Systems**

While many people do not see the connection between fire prevention and fire operations there is an increased emphasis on the qualification of fire personnel also. With increased emphasis on complex fire code enforcement and the need to possess very specific skill sets. Fire prevention organizations, specifically the International Code Council and the National Fire Protection Association have

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<sup>22</sup> Wildland Fire Qualification System Guide, PMS 310-1, National Interagency Incident Management System, April 2006

both created certification systems for fire inspectors. While these systems are based on NFPA standards (1031 and 1035) they tend to be less visible than the operations oriented certification systems. One can easily make the argument that plan reviewers and fire inspectors are helping to create the environment on the inside of a building. They may be contributing to firefighter safety in very profound ways and the certification process for inspectors is one way of assuring that competency.

### **Career Development Guidance**

The net result of human resource department commitment to the use of these systems has led to the requirement in many organizations to provide career development guides and to develop succession plans that will help guide individuals as they move forward with their own careers. Rather than taking a bunch of random courses, the succession planning or career development guide process provides an incumbent employee with an opportunity to plan out their career by selecting appropriate courses of instruction. That way they can be evaluated in a process that assures their preparation for promotion.

### ***Individual Commitment to the Process***

The fire service gets a lot of respect from society. But that respect is not necessarily based on how well we do our job. Sometimes it is based on the fact that society recognizes how dangerous firefighting is. The manner in which this is sometimes measured is in the loss of life. Those are people, not just numbers. Every year we go back to the Fallen Firefighter Memorial and pay a form of respect that is a pyrrhic victory. The modern motto that is attempting to reverse that is “everyone goes home”. Everyone, labor – management – family – friends wants to see the fire service a safer occupation. Our ultimate value may well be in establishing and maintaining our professional credentials to do the job. This requires a commitment on the part of all parties who are decision makers in the fire service.

You should not doubt that there are those that disagree with this assessment. They do not believe that standards are for them or that there is a consequence of failure for not adopting standards. The individual commitment begins with you. It is relayed through those that you have influence over and will ultimately be measured by how your organization and your peers support and implement training and education processes.

Earlier in this chapter, we compared firefighter safety to the safety of those who go into armed combat. This is not an accidental comparison. It is relevant. The people who pay the price for failing to recognize the importance of meeting standards goes far beyond the casualties themselves. Our community pays the price in terms of liability. Our families pay the price in terms of emotional impact and our profession pays the price with lack of credibility in some circumstances.

An organization with a high percentage of commitment to setting and keeping standards is going to be a more credible organization than one that does not have that level of commitment. Everyone from the rookie firefighter to the fire chief should have a career development plan that incorporates exposure to the appropriate training materials, testing and measurement of the standards and official recognition by an accredited entity that you have achieved this level of competency.

## **Participation in the Standards Making Process**

Throughout this chapter the names of individuals have been used to identify important events. That was not by accident. The intent was to demonstrate that one individual can make a difference. Furthermore, a group of individuals who are working together who are focused can make a world of difference. The standards making process requires participation to keep it relevant and viable. Individual commitment includes making the effort to identify needed changes in the standards. This suggestion does not imply that everyone has to be on an NFPA committee. But everyone should be reviewing the standards and submitting recommendations through the participative process to make sure that external influences do not weaken our standards process.

### ***The Latest Wingspread Report***

If the past is prologue, then the present must be evidence of its impact. Trends and patterns that have been developing over a period of 100 years are not likely to reverse themselves. The quest for professionalism continues. The emphasis on increasing the level of intensity for meeting standards has not diminished over time. In the latest version of the ongoing Wingspread series 2008, it states;

*“Significant strides have been made in fire service professional development, but improvement is still needed. The fire service needs to continue to evolve as a profession as have other governmental entities that operate in the environments where we work as well as other governmental organizations and the private sector. These skills are as important in the volunteer and combination fire services as they are in the career fire service.*

*Universal acceptance and use of a credentialing system will help in professional development, but the availability of degree programs in fire science and fire department management are necessary to reach the level of competence needed for firefighters and fire executives. Each state should have at least one two-year degree program available in the community college system, to provide basic knowledge and skills.*

*Bachelor degree programs should also be available to firefighters who wish to pursue them, at reasonable cost.”<sup>23</sup>*

No one can accurately predict the future but if the last 50 years of developmental processes have created any sense of how chiefs will go on in the future, increasing demands on the fire service will definitely increase the need to be properly trained, properly equipped and to properly prioritize that a person is qualified to be put into harms way.

### **Not to be Taken for Granted**

Having stated that the trends and patterns have taken us to where we are today we must also recognize that the system can also erode over time. The individual and organizational commitment required to get us to where we are today should be regarded as fundamental. The amount of commitment in the future by both leaders and labor in the fire service needs to be equally intensive. Every year a fire chief must prepare and defend a budget. Every year a department must make choices regarding its priorities. Providing justification regarding keeping a training program at a high level of competency and providing support for education incentive programs are often easy targets during tough economic times. It is the role of the fire chief to constantly be assessing the skill set of the department. This includes preserving the integrity of the system for certification and qualification. One cannot assume that this will happen. To the contrary. It is not uncommon for the first casualty of a budget battle to be a training system. The military would not tolerate removing its ability to train and neither should the fire service. Firefighter safety is not a cost. Firefighter safety is an investment.

### **Summary**

While it might have been true once that anyone who could pick up a bucket and throw water on a burning building was called a “firefighter”, that phenomenon has long since passed into history. Today the term firefighter has a series of requirements attached that define that person as having been trained, tested and authorized to be part of an organization that responds to emergencies. Notably in this chapter there have been no distinctions drawn about whether or not the person that has received acknowledgment is in receipt of compensation for this activity. That is a distinction of employment and not one of competency. In essence there are individuals that are not certified or licensed to perform in this field, but are nonetheless employed. There are individuals that are certified and licensed to perform in this field and they are compensated.

The difference that this entire chapter speaks to is it that a person that is trained to meet specific standards and has the knowledge of the entire spectrum of

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<sup>23</sup> Wingspread 2008



performance has been tested and evaluated is much more likely to be able to perform the job safely and effectively. The opposite can also be true.

In the modern world of emergency operations the difference between professional and amateur is often more based upon their subscribing to the standards than it is to compensation or experience.

## Questions

For purposes of this draft the answers are bolded.

1. Firefighting is an inherently dangerous occupation. Therefore, individuals who become firefighters should be measured primarily by:
  - a. their willingness to expose themselves to danger
  - b. their courage when faced with stressful situations
  - c. their desire to serve the community
  - d. compliance with minimum standards of training and education**
  
2. The development of knowledge, skills and abilities required of a firefighter is:
  - a. a modern thought based upon contemporary requirements
  - b. a traditional concern
  - c. a process that is evolving
  - d. all of the above**
  
3. Which of the following organizations provides accreditation to fire service organizations authorizing them to issue certificates to demonstrate competency?
  - a. The Wingspread Conference
  - b. National Professional Qualifications Board**
  - c. Trade Analysis of Fire Engineering
  - d. Fire and Emergency Services Higher Education Summit
  
4. Which of the following reasons is one of the primary factors in revising standards over time?
  - a. Changes needed to make it easier to meet minimum standards
  - b. Changes needed to keep up with technological advances**
  - c. Changes needed to match curriculum requirements
  - d. Changes needed to make it more difficult to achieve certification

5. Which of the following organizations is responsible for the maintenance of the standards utilized by the fire service?
- a. FESHE
  - b. Long Distance Learning Program
  - c. National Association of State Fire Training Directors
  - d. None of the Above**

## **Glossary of Terms**

Accreditation – *official authorization to deliver programs that conform to a set of standards. Accreditation is given to organizations that then have the ability to certify individuals.*

Certification – *confirmation that a person possesses a specific level of training or education.*

Continuing Education Unit (CEU) – *a requirement within a system that an incumbent spend a specific number of hours or perform a certain set of skills to determine currency for whatever they were certified for previously.*

Credentialing – *the process of formal recognition that a person has a specific set of knowledge, skills and abilities to meet a scope of practice.*

Doctrine – *a codification of beliefs or “a body of teachings: or “instructions”, taught principles or positions, as the body of teachings in a branch of knowledge or belief system.*

Licensure – *the granting of a license by a state giving a person permission to practice.*

Lower Division – *an academic environment in which individuals receive college credit aimed at courses of instruction that are no more than a two year level degree, i.e. community college*

Professional – *a calling requiring specialized knowledge accompanied by a long and intensive academic preparation.*

Professional Recognition – or (designation) – *processes to recognize a persons life experience that is a capstone to a training and education system*

Specialization – *the definition of distinct competencies that are associated with the use of specific tools and technologies.*

Standard – *is an established norm or requirement; a formal document that establishes uniform technical criteria, methods, processes and practices*

Upper Division - *an academic environment in which individuals receive college credit aimed at courses of instruction that are no more than a four year level degree, i.e. university*

Trade Analysis – *a study of the fireman’s job made under the authority and jurisdiction of the federal board for vocational education, published as bulletin #155 which provides a catalog of the list of jobs to be taught to firefighters in order to properly introduce principles of vocational training. Used to develop a suitable list of short unit courses. Divided into blocks, units, checking levels and type of jobs.*