

Analysis of Recruit / Initial Fire Fighter Training Curricula

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for

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1 Introduction

The level of training provided to recruit or initial fire fighter candidates in fire service training institutions is widely varied in curricula and the number of hours in the structured training programs. While NFPA professional qualifications standards are not intended as training documents, many training institutions refer to the standards when designing and implementing their curriculum. Furthermore, the two major international accreditation agencies – namely Pro Board and IFSAC – require that training institutions meet or surpass the training suggested within the NFPA 1001 standard for consideration of accreditation.

NFPA 1001 Standard for Fire Fighter Professional Qualification is developed and published by the National Fire Protection Association and recommends the minimum competency of job related skills typically required to perform the duties of professional firefighters. The standard is expressed as a series of Job Performance Requirements (JPRs) that must be accomplished in an accredited training program, and does not dictate how the training must be completed. As it stands, NFPA 1001 is broken into two sections: Firefighter I and Firefighter II. A distinction in some jurisdictions is made that volunteer firefighters need only to be trained to Firefighter I.

While the NFPA 1001 standard lists the specific Job Performance Requirements and information necessitated to complete these tasks, the standard does not discuss the amount of time that is required to properly address these requirements. As a result, it has been seen that different institutions assess the importance of each JPR differently, and as a result, it is possible that the proportion of the training time for each JPR varies widely between training institutions across North America. For this reason, an investigation into the standard practices of training institutions is warranted to address this dearth of information. A recommended timeline to accompany the NFPA 1001 standard would help to increase the uniformity of the training programs across North America.

2 Objective

The purpose of this project is to identify state and provincial fire service training institutions and survey them about their curriculum and the number of formal training hours that they provide for recruit or initial fire service fire fighter training, including awareness and operations level hazardous materials. For ease of comparison, this study focused on firefighter students training for employment with municipal fire departments and therefore does not consider those trained by the Canadian Military or United States Department of Defence.

The distinct tasks of this project include:

Task 1: Literature Review.

Identification of the institutions that use NFPA standards through information from the National Board on Fire Service Professional Qualifications (Pro Board) and International Fire Service Accreditation Congress (IFSAC).

Task 2: Survey & Analysis.

Design, dissemination and analysis of a survey of the various state and provincial fire service academies who deliver recruit or initial fire fighter training including awareness and operations level hazardous materials. This survey will ask about the curricula and the number of formal training hours for the years 2011-2012. The number of certifications awarded by each program will also be collected as one measure of the success of each program and will be compared to the actual curricula and training hours for that program.

Task 3: Prepare Final Report.

The key findings will be recorded in a final report.

3 Background

NFPA 1001 presents a set of Job Performance Requirements that must be completed by the students in recruit or initial firefighter training programs in order for the training institution to be considered for accreditation. The NFPA 1001 2008 standard includes a list of 38 JPRs, broken into 25 JPRs for Firefighter I and 13 JPRs for Firefighter II. The JPRs are written as a guide for what the student must achieve, and what assistance is allowed.

The training institutions are responsible for delivering the program to the students, including the order of the training, ratio of practical to theoretical training, and the amount of time spent training on each of the JPRs. These specifics of the training programs often differ widely across the different institutions.

There are two agencies that utilize the NFPA 1001 standard as the minimum requirements for accreditation. These agencies are Pro Board [1] and IFSAC [2], which are both independent international accreditation agencies. Training institutions which have been accredited by one of the two agencies allows them to provide certification to students, which with few exceptions, is required for new fire fighters to gain employment as fire fighters in most provinces and states across North America. A graphic depiction of the accreditation authority for the provinces and states in North America is shown in [Figure 1](#). As can be seen from the map, most provincial or state fire authorities accept qualifications from at least one of the two authorities, and many jurisdictions accept both. While much of North America has training programs accredited by one of the two agencies, Michigan and South Dakota have their own legislative authority. It is worth noting that, in most cases, fire fighters trained in these jurisdictions must write equivalency exams or prove sufficient work experience in order to gain employment in jurisdictions requiring accreditation by Pro Board or IFSAC.

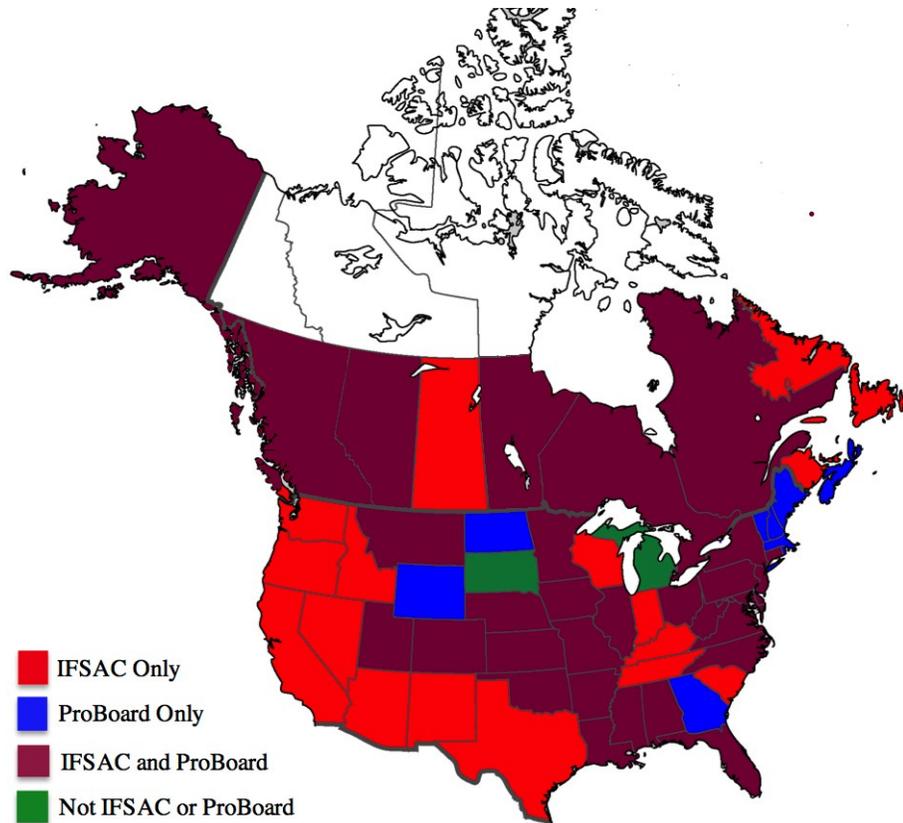


Figure 1: Accreditation of fire training institutions in North America.

4 Methodology

The process of identifying and surveying the various fire training institutions was four-fold. Initially, the names of the various institutions that used the NFPA 1001 standard were identified through a review of the members of Pro Board and IFSAC. A survey was then constructed, targeting the training requirements of these institutions. The information was assembled and analysed, with the primary focus of identifying the training time distribution for the different training programs. Lastly, a final report was prepared, summarizing the findings.

The survey respondents were selected from the training institutions in North America that use the NFPA 1001 standard in training firefighter students. Institutions were identified from the agencies accredited by either Pro Board or IFSAC, as listed on the Pro Board [3] and IFSAC [4] websites. Appendix A shows the list of individuals contacted and whether a response was obtained from them.

Information on the training requirements of the different training institutions was collected via a targeted survey sent to the various organisations across North America. The surveys were designed

to gain information on the amount of time spent on the various components of the initial firefighter training program, including time spent on the NFPA 1001 JPRs, NFPA 472 HAZMAT training, and any other programs offered.

A number of survey distribution methods were considered for use in collecting the data from the training institutions. Ultimately, a web-based approach was utilized due to the ease of distribution, minimization of cost, and ease of data collection. Several on-line survey distribution sites exist and therefore an analysis of the different options was undertaken. Examples of the different surveys choices considered for this project are shown in Table 1. The survey distribution website selection was based on the following criteria: ease of use, low cost, professional appearance, and back-end analysis tools.

Table 1: On-line survey distribution tools considered for study.

freeonlinesurveys.com	Free for basic features, cannot be exported
surveymonkey.com	Free for a limited number of respondents
questionpro.com	Low cost, high functionality, data analysis tools
esurveyspro.com	Limited functionality, paid version includes many features
websurveymaster.com	Limited functionality
limesurvey.org	Complicated implementation, but effective

Given the choices of on-line survey tools, QuestionPro [5] was chosen as the most effective distribution and analysis tool. QuestionPro is an on-line survey distribution and data analysis web-site, specializing in professional marketing and customer feedback style surveys [5]. This tool is widely regarded for high security, customization of the survey appearance, and powerful data analysis tools. Question options from this survey include open ended text, multiple choice, choice ranking, and numerical input. It has a high documented email delivery rate and emails from the QuestionPro servers do not get sorted as junk mail by many email filters [5].

The survey was designed to garner information on the type of training provided to students, the amount of time spent in classes and on practical skills training, and the additional courses provided to students. A copy of the survey is included in Appendix B. It consisted of a list of questions specifically asking about the hours spent on each of the Job Performance Requirements during training, to gain information on typical training requirements. A similar question queried the same information for the HAZMAT Awareness and Operations training. Other questions sought information about the other certificates granted to students, and the number of successful student completions per course in an effort to gauge the effectiveness of the various programs. In total the survey was designed to take approximately 15 to 25 minutes to complete.

Per the list of survey respondents shown in Appendix A, the survey was sent to training directors of 50 state fire training programs in the United States of America, and the 10 provincial directors of the Canadian provinces. Table 2 shows the number of people contacted from each political jurisdiction.

Table 2: Summary of persons and institutions contacted to complete survey.

Summary	Number
<i>Number of persons contacted</i>	70
<i>Number of institutions represented</i>	70
<i>Number of states represented</i>	50
<i>Number of provinces represented</i>	10

The survey was designed through the spring of 2014, and was made live during the summer of 2014. The survey was first sent to the entire training institution email list (Appendix A) on July 7, 2014. The survey was accessible through a link in the request email. A second, reminder email was sent on September 2, 2014 to the people who had not responded to the first attempt. The survey was taken down on September 19, 2014. Finally, a list of bounced emails was recorded and alternative attempts to contact these people were made.

5 Results

As discussed in Section 4, the survey was designed and distributed in the effort of collecting information on the amount of time spent on each of the Job Performance Requirements in the NFPA 1001 training standard. A breakdown of the survey respondents is shown in Table 3. It is clear from this table that the majority of the persons contacted opened the survey; however, response to the survey was limited as a significant number of contacts did not complete the survey. Only 4 people, or 6% of those contacted, fully completed the survey. These 4 respondents were the only respondents who completed the section of the survey requesting the number of hours spent on each JPR, which was the main focus of this study.

Table 3: Summary of survey respondents.

Description	Number	Percentage
<i>Total contacted</i>	72	100
<i>Did not open survey</i>	3	4
<i>Opened survey; did not begin</i>	47	65
<i>Began survey; did not complete</i>	18	25
<i>Completed JPR section</i>	4	6

Due to the poor uptake on the survey, some factors that may have contributed to the low rate of return were identified and are outlined here. It is possible that the survey was not designed to encourage participation from the training directors, since for example, the objectives of the survey were not clearly stated in the introduction of the survey. As a result, the benefit of completing the

survey may not have been obvious to the potential respondents. As well, the complexity and time required to determine and fill out the time spent on theory and practice for each of the JPRs included in the curriculum may have discouraged participation in the survey. Finally, the timing of the survey distribution corresponded to summer break for several of the institutions, and consequently many training directors were on vacation at this time.

Regardless of the limited number of respondents to the survey, there is some information to be gained from the replies. The rest of this section details the 22 survey responses, including the full and partial replies. These include responses of training directors from 16 fire fighter training institutions, representing 3 Canadian provinces and 13 American states. Of note from the survey responses are the number of hours that are spent on the JPRs, the comments left by the respondents and the levels of training provided to career and volunteer fire fighter students.

Appendix C shows the breakdown of the hours spent on each component of the JPRs listed in the NFPA 1001 standard, as recorded from the surveys. Of note from these numbers, is the proportion of time spent on each of the JPRs in comparison to other activities, as well as the breakdown between the theoretical training and practical activities undertaken. For example, JPR 5.2.2, *Receive a telephone call*, had the lowest average number of hours spent on combined theoretical and practical components, in relation to the other JPRs. For comparison, JPR 5.3.19, *Combat a ground fire operating as a member of a team*, had the highest average time spent on theory, while JPR 5.3.1, *Use self-contained breathing apparatus during emergency operations*, had the highest amount of time spent on practice. On average, approximately two times as much time was spent on the practical component than the theoretical component for each of the JPRs, with rather little deviation. A notable exception to this observation was for JPR 5.3.6, *Set up ground ladders*, where approximately five times more time was spent on the practical component, on average. However, since use of ladders is a skill encountered in many activities, it could be that this abnormality stems from estimation of the practical time spent on this JPR based on the combined time spent on skills training.

In the same fashion as Appendix C, Appendix D shows the number of hours as recorded from the surveys for the Firefighter II portion of NFPA 1001. A similar time requirement for these JPRs is seen as for those in the Firefighter I. As examples of the extremities of the data, JPR 6.3.2 *Coordinate an interior attack line for a team's accomplishment of an assignment in a structure fire* was the highest time requirement for both practical and theoretical training. Conversely, JPR 6.5.1, *Perform a fire safety survey in an occupied structure* had the lowest time requirement for practical skills training. Lastly, JPR 6.5.5, *Perform an annual service test on fire hose* was found to have the lowest time spent on theoretical training. Similar to FFI, the ratio of practical to theoretical work was approximately 1.5, with a maximum ratio of 4 for JPR 6.3.2. Again, as this is a very skills intensive JPR, this large number may be a result of the method used to estimate the time requirements.

A common theme in the comments of the survey respondents was that the training institutions do not structure their training requirements around the Job Performance Requirements listed in the NFPA 1001 standard. That is to say that several of the JPRs could be covered by a single skill that

is practised regularly. Other institutions practice scenario based training drills, where several skills are combined into one practical scenario, and therefore encompass multiple JPRs. For this reason, the hours listed in Appendix C and D are estimates of the likely number of hours spent on each JPR, as it is difficult to break the time spent on each scenario into the various related JPRs.

While the data presented above does give some measure of the amount of time spent on each JPR for Firefighter I and Firefighter II, there is a reasonable amount of error inherent in the replies received. Firstly, the data presented was taken as statistical analysis of four responses, and as such, is subject to large uncertainty. Secondly, it must be noted that the answers from each of the persons responding indicated that they had estimated the number of hours spent on each JPR, as they either did not keep track of these numbers, or they do not model their training around the individual JPRs. From the comments received in the surveys, it can be said that most training institutions perform a 'skills-based' training program, where the training is based on distinct skills, rather than specific JPRs. This being said, an estimate could be made for how much time is spent on each JPR based on how closely the JPR matches the distinct skill; however, it remains an estimate, and is subject to the discretion of the individual. A final comment on the validity of this data relates to the differentiation between time spent on theory and time spent on practical elements. Quite often there is little distinction between the two which may also be a cause of uncertainty in these results.

Similar to the JPR questions, a question was asked in the survey to gain information on the amount of time spent on skills and theoretical training during initial training on HAZMAT. A summary of the hours for the Awareness and Operations level HAZMAT course is shown in Appendix E. The training provided during HAZMAT training appears to be relatively consistent across the various training institutions. On average, more time was spent on the Operations segment of the course, which is consistent with the relative amount of information in each section. Contrary to the results of the Firefighter I and II courses, the skills based training was often covered in much less time than the theoretical sections. While the Firefighter courses saw a ratio of almost two hours of practice per hour of training, the HAZMAT courses had an inverse relation, where two or more hours were spent in the class room for each hour of skills training. This is not unexpected, however, as the HAZMAT training involves a lot of theoretical material, and practical scenarios are costly and require significant equipment. A breakdown on the number of hours that each institution spent on the entire HAZMAT course is shown in Figure 2. Most institutions required 20 to 30 hours to complete the course, while very few of the institutions spent more than 35 hours on the course.

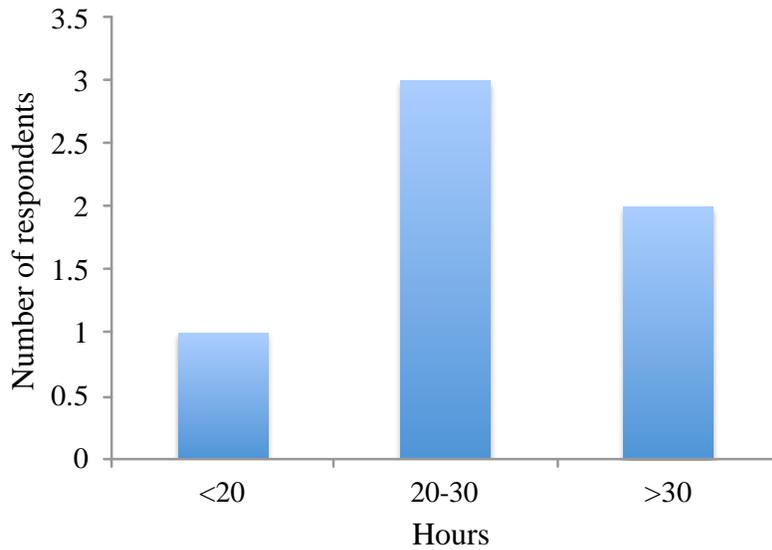


Figure 2: Number of institutions per grouping of hours spent on HAZMAT training

The total number of hours in the state or provincial fire training curriculum varied significantly between the various institutions in this study. Figure 3a shows a summary of the total number of hours in each fire training facility curriculum. Figure 3b shows a summary of the breakdown between the hours in the curriculum for the NFPA 1001 Firefighter I and Firefighter II. As would be expected, more time is typically spent on Firefighter I than Firefighter II. The average time required for the total program is approximately 270 hours.

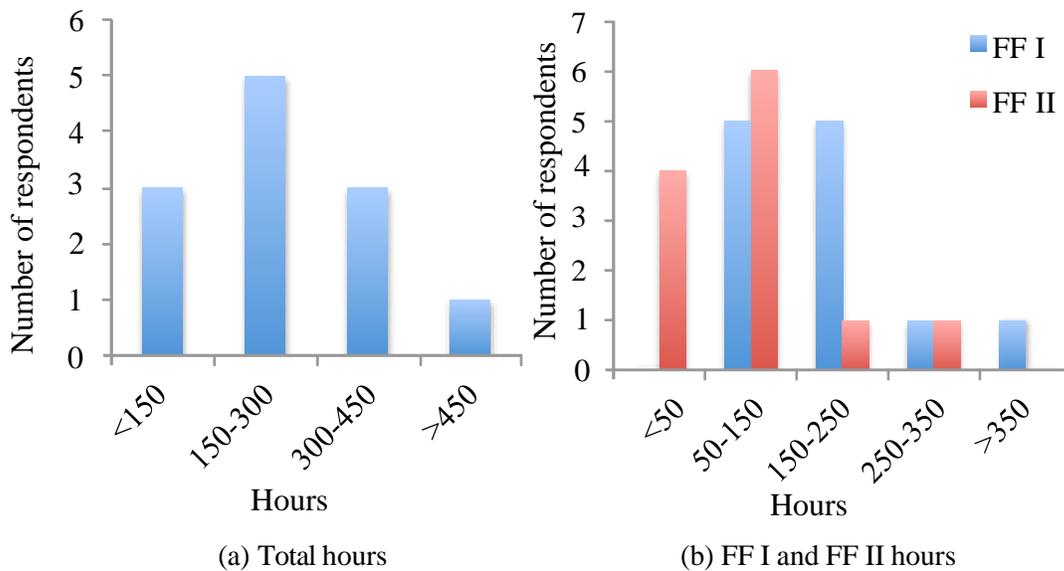


Figure 3: Curriculum hours for Firefighter I and Firefighter II as tallied from survey responses.

Accreditation of the training institutions who responded to the survey was well represented by both IFSAC and Pro Board. Figure 4 shows a breakdown of the accreditation of the training institutions. Almost half of the institutions polled were accredited by both IFSAC and Pro Board, while some institutions were accredited by only one of the agencies. Of note is that California State Fire Marshal's Office is not accredited by either agency; however, their training program includes far more hours than programs at the other institutions surveyed in this study.

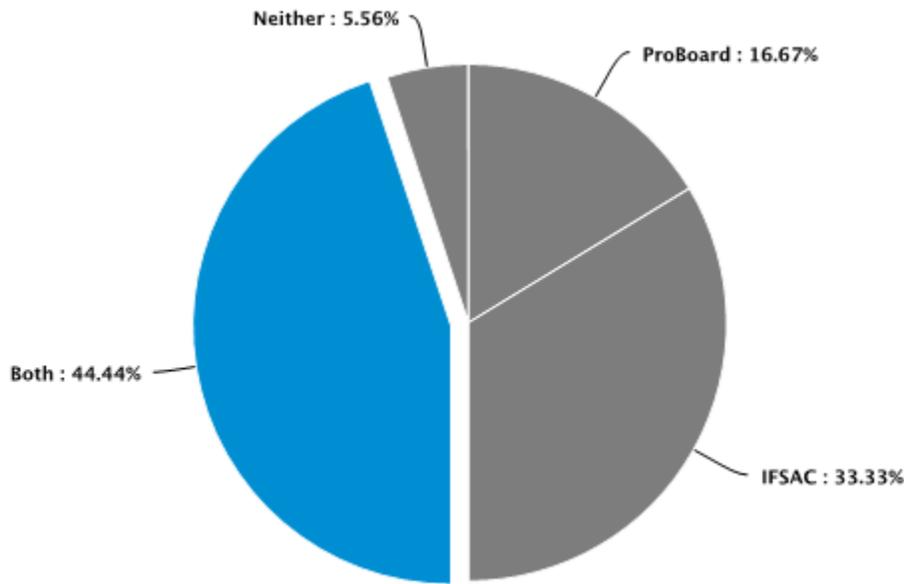


Figure 4: Accreditation of survey respondents.

From the responses gained in this survey, it appears that training provided volunteer firefighters is approximately equivalent to the training provided to those aiming to obtain career positions. All of the respondents indicated that Firefighter I, Firefighter II, HAZMAT Awareness and HAZMAT Operations is made available to students in both volunteer and career training programs. Beyond the requirements of Firefighter I and II, as well as HAZMAT, fire training institutions often provide supplementary training and courses. Some of the extra courses listed by the institutions includes:

- Emergency vehicle driver
- Pump operator
- Technical rope rescue
- Fire officer 1, 2, and 3
- Fire investigator 1

6 Conclusion and Recommendations

This study provided an analysis of the amount of training typically provided to students of fire training institutions across North America. A survey requesting details on the time spent on Job Performance Requirements was sent to 70 potential respondents from state and provincial fire fighter training institutions. This study analysed the responses of training directors from 16 fire fighter training institutions, representing 3 Canadian provinces and 13 American states.

From the responses, it was found that the average firefighter training curriculum encompasses approximately 270 hours of theoretical and skills-based training. The curriculum in all cases covered Firefighter I and II, as well as HAZMAT Awareness and HAZMAT Operations. Further training was often provided, including subjects such as fire investigation and emergency driver training. A clear distinction between volunteer and career fire training courses was not noted.

This survey received limited responses with only 6% of persons contacted fully responding to the survey. Furthermore, the respondents who did fill out the JPR hour table in the survey may not have been able to accurately represent the training performed at their institutions. From the comments and responses to the present survey, it appears that the survey, as structured, was not an effective way to garner a measure of the time spent on each of the JPRs. Many respondents did not have the information available to make a comment on the hours spent on each JPR, and for others, the training program was not structured in a way that these numbers would be apparent to the training directors. If this project was to continue, some improvements to the design of the survey could be made. For example, while the number of hours spent on each JPR was not available, an amount of time spent on a series of skills or scenarios broadly related to a set of JPRs was typically used in the design of the curriculum. Therefore, if a survey was designed to query the amount of time spent on each skill, potentially the information could be used to more consistently determine the amount of time spent on each JPR.

An extension to this project could use data amassed from the typical activities of fire departments to compare the amount of time spent on training during initial firefighting classes to the amount of time spent performing these activities. The number of hours spent on the various skills during initial training could then be optimized to better reflect the activities and needs of modern fire departments.

References

- [1] The Pro Board (2014) *Pro Board Fire Service Professional Qualifications System*. [Online] Accessed 22/09/2014 from <http://www.theproboard.org/default.htm>
- [2] IFSAC (2014) *International Fire Service Accreditation Congress*. [Online] Accessed 22/09/2014 from <http://www.ifsac.org/>
- [3] The Pro Board (2014) *Pro Board Fire Service Professional Qualifications System: Accredited Agencies*. [Online] Accessed 07/05/2014 from <http://www.theproboard.org/agencies.htm>
- [4] IFSAC (2014) *Degree Assembly Accredited Entities and Programs: As of April 2014*. [Online] Accessed 07/05/2014 from http://www.ifsac.org/Degree_Assembly/Accredited_Programs.pdf
- [5] QuestionPro (2014) *QuestionPro*. [Online] Accessed 02/04/2014 from http://www.ifsac.org/Degree_Assembly/Accredited_Programs.pdf

A List of Agencies Contacted

Province/State	Institution	Name	Reply
Pro Board			
Alabama	Alabama Fire College	Allan Rice	
Alaska	Alaska Fire Standards Council	Gordon Descutner	
Alberta	Office of the Fire Commissioner	Patrick Henneberry	
Arkansas	Arkansas Fire Academy	James N. Utsey	
Connecticut	State of Connecticut	William Trisler	
Colorado	Division of Fire Prevention and Control	Theresa Staples	
Delaware	Delaware State Fire Prevention Commission	Robert Newman	X
Florida	Florida Bureau of Fire Standards and Training	Dennis Hackett	
Georgia	Georgia Firefighter Standards and Training Council	Mr. David Cummings	
Illinois	Illinois Fire Service Institute	Brian Brauer	
Iowa	Iowa Fire Service Training Bureau	John D. McPhee	
Kansas	Fire Service Training - University of Kansas	David Couvelha	
Louisiana	Louisiana State University Fire and Emergency Training Institute	Alan Joos	
Maine	Maine Fire Fire Service Institute	Peter Rines	
Manitoba	Manitoba Emergency Services College	Ms. Brenda Popko	
Maryland	Maryland Fire Service Personnel Qualifications Board	Lawrence L. Preston	X
Massachusetts	Massachusetts Fire Training Council	Shawn P. Murray	
Minnesota	Minnesota Fire Service Certification Board	Theresa Zikmund	
Mississippi	Mississippi State Fire Academy	Shannon Sandridge	
Missouri	Missouri Division of Fire Safety	Kimberly Becker	
Montana	Montana Fire Service Academy	Steve Harada	
Nebraska	Nebraska State Fire Marshal's Office - Training Division	Chuck Hoffman	
New Hampshire	New Hampshire Department of Safety, Division of Fire Standards and Training and Emergency Medical Services	Jeffrey Philips	
New York	New York State Office of Fire Prevention and Control	James B. Cable	
North Dakota	North Dakota Firefighter's Association	Rob Knuth	

Province/State	Institution	Name	Reply
Nova Scotia	Nova Scotia Fire Service Professional Qualifications Board	Bernie MacKinnon	
Ohio	Ohio Department of Public Safety - Division of EMS	Doug Orahood	X
Oklahoma	Oklahoma Fire Service Training at Oklahoma State University	Tara Stevenson	
Ontario	Office of the Ontario Fire Marshal	Doug Goodings	X
Pennsylvania	Pennsylvania State Fire Academy	Tracy Young-Brungard	
Rhode Island	Rhode Island Fire Academy		
Utah	Utah Fire & Rescue Academy	Lori Howes	
Vermont	Vermont Fire Service Training Council	James A. Litevich	X
Virginia	Virginia Department of Fire Programs	Willie G. Shelton	
West Virginia	West Virginia University Fire Service Extension	Mike Caravasos	
Wyoming	Wyoming Department of Fire Prevention and Electrical Safety	Rita Lee	

IFSAC

Alabama	Alabama Fire College	Kim Davis	X
Alaska	Alaska Fire Standards Council	Gordon Descutner	
Arizona	Arizona Center for Fire Service Excellence	Paul Adams	
Arkansas	Arkansas Fire Academy	Rachel Nix	
California	California Department of Forestry & Fire Protection, Office of the State Fire Marshal	Ken Wagner	X
Colorado	Colorado Division of Fire Prevention and Control	Theresa Staples	
Connecticut	Commission on Fire Prevention & Control	William Trissler	
Colombia	District of Colombia Fire & Emergency Services	Robert Pearson	
Florida	Florida State Fire Marshall, Bureau of Fire Standards and Training	Bill Wentlandt	
Hawaii	Honolulu Fire Department	George Kaopuiki	
Idaho	Fire Service Technology, Idaho Division of Professional Technical Education	Sandra Wiensz	
Illinois	Southwestren Illinois College	Lee Smith	

Province/State	Institution	Name	Reply
Indiana	Indiana Board of Firefighting Personal Standards and Education	Greg Wyant	
Iowa	Fire Service Training Bureau	John McPhee	
Kansas	Kansas Fire and Rescue Training Institute	Dave Couvelha	
Kentucky	Kentucky Fire Commission	Duane Suttles	
Louisiana	LSU Fire and Emergency Training Institute	Alan Joos	
Maryland	Maryland Fire Service Personal Qualifications Board Inc.	Ronald Hassan	
Minnesota	Minnesota Fire Service Certification Board	Nyle Zikmund	
Mississippi	Mississippi Fire Academy	Shannon Sandridge	
Missouri	Missouri Division of Fire Safety	Kim Becker	
Montana	MSU Fire Services Training School	Thomas Solberg	
Nebraska	Nebraska State Fire Marshal Training Division	Bill Pfeifer	
Nevada	State of Nevada, Division of the State Fire Marshal	Dennis Pinkerton	
New Jersey	New Jersey Division of Fire Safety	Kent Neiswender	
New Mexico	New Mexico Firefighters Training Academy	Reys Romero	
New York	Public Safety Training Center - Onondaga Community College	Douglas Whittaker	X
North Carolina	North Carolina Fire & Rescue Commission	Wayne Bailey	X
Ohio	Division of State Fire Marshal	Gerald Robinson	
Oklahoma	Oklahoma State Fire Service Training	Tara Stevenson	
Oregon	Portland Community College	Bill Benjamin	
Pennsylvania	Office of the State Fire Commissioner/Pennsylvania State Fire Academy	Tracie Young-Brungard	
South Carolina	South Carolina Fire Academy	Rick Dunn	
Tennessee	Tennessee Commission on Firefighting Standards & Education	Gary West	
Texas	Texas Commission on Fire Protection	Mollie Clakley	X
Utah	Utah Fire and Rescue Academy	Lori Howes	
Virginia	Virginia Department of Fire Programs	David Jolly	
Washington	Washington State Patrol - Fire Protection Bureau	Bill Slosson	X
West Virginia	West Virginia Department of Education	Edward Hicks	

Province/State	Institution	Name	Reply
Wisconsin	Wisconsin Fire Education and Training	Peter Silvia JR	X
Alberta	Office of the Fire Commissioner - Alberta Municipal Affairs	Patrick Henneberry	
British Columbia	Justice Institute of British Columbia	Mika Fryling	
Manitoba	Manitoba Emergency Services College	Tobin Praznik	X
Newfoundland	Fire and Emergency Services - Newfoundland and Labrador	Derek Simmons	
Nova Scotia	Nova Scotia Fire Service Professional Qualifications Board	Bernie MacKinnon	
Ontario	Office of the Ontario Fire Marshal	Doug Goodings	
Prince Edward Island	Atlantic Police Academy	Paul Landry	
Quebec	Ecole Nationale des Pompiers du Quebec	Benoit Laroche	
Saskatchewan	Office of the Fire Commissioner	Trent Catley	X

B Initial/Recruit Firefighter Training Survey

This survey is being distributed through a partnership with the University of Waterloo (UW) and the National Fire Protection Association (NFPA) in an effort to identify the level of training provided to students during initial and recruit fire fighter training. This survey is structured to provide insight on the level of training provided to students for each Job Performance Requirement (JPR) as established in NFPA 1001: Standard for Fire Fighter Professional Qualifications. The aim of the survey is to gather data on the number of hours for training that is associated to Fire Fighter I and II JPRs and total hours for HazMat awareness and operations training. Please respond to the following questions in reference to your training programs for the academic year of 2011-2012. Please complete this survey by Friday, August 22, 2014 to be included in the study.

Facility Name *

Province/State *

Survey Respondent *

Position *

Contact email *

Facility Accreditation *

- ProBoard
- IFSAC
- Both
- Neither

Please respond to the following questions regarding the structure of the training curriculum.

Total number of hours in Fire Fighter I curriculum in the 2012 schedule

Total number of hours in Fire Fighter II curriculum in the 2012 schedule

Average number of students enrolled per class in 2012

If there is a distinction between the training provided for students training to become volunteer fire fighters or those to be career fire fighters, please respond to the following questions. Indicate in the boxes if the following training is provided to the volunteer, career, or both types of students.

	Volunteer	Career	Both
Firefighter I	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Firefighter II	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
HAZMAT Awareness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If your institute offers students enrolled in the fire fighting training program any of the following courses or certifications as part of the standard curriculum (for example, offered at no additional cost), please indicate the time requirement for that component and the certification granted, if applicable.

	Time Requirement	Certification Name
Fire Officer Professional Qualifications	<input type="checkbox"/>	<input type="checkbox"/>
Fire Investigator	<input type="checkbox"/>	<input type="checkbox"/>
Fire Apparatus Operator	<input type="checkbox"/>	<input type="checkbox"/>
Technical Rescue	<input type="checkbox"/>	<input type="checkbox"/>
High Angle Rope Rescue	<input type="checkbox"/>	<input type="checkbox"/>
Trench Rescue	<input type="checkbox"/>	<input type="checkbox"/>
Confined Space	<input type="checkbox"/>	<input type="checkbox"/>
Wildland Firefighting	<input type="checkbox"/>	<input type="checkbox"/>
Water Safety	<input type="checkbox"/>	<input type="checkbox"/>
Swift Water Rescue	<input type="checkbox"/>	<input type="checkbox"/>
Ice Rescue	<input type="checkbox"/>	<input type="checkbox"/>
Boating Safety	<input type="checkbox"/>	<input type="checkbox"/>
H2S Alive	<input type="checkbox"/>	<input type="checkbox"/>
Offroad Rescue	<input type="checkbox"/>	<input type="checkbox"/>

Based on the 2008 version of the NFPA 1001 training standard, please indicate, based on the 2012 training schedule, how much time (rounded to the nearest hour) was allotted to each of Job Performance Requirement for theory training and practical skills training. This section is for the Fire Fighter I section, Chapter 5.

	Time on theory	Time on practice
5.2.1 Initiate the response to a reported emergency	<input type="checkbox"/>	<input type="checkbox"/>
5.2.2 Receive a telephone call	<input type="checkbox"/>	<input type="checkbox"/>
5.2.3 Transmit and receive messages via the fire department radio	<input type="checkbox"/>	<input type="checkbox"/>
5.3.1 Use self-contained breathing apparatus (SCBA) during emergency operations	<input type="checkbox"/>	<input type="checkbox"/>
5.3.2 Respond on an apparatus to an emergency scene	<input type="checkbox"/>	<input type="checkbox"/>
5.3.3 Establish and operate in work areas at emergency scenes	<input type="checkbox"/>	<input type="checkbox"/>
5.3.4 Force entry into a structure	<input type="checkbox"/>	<input type="checkbox"/>
5.3.5 Exit a hazardous area as a team	<input type="checkbox"/>	<input type="checkbox"/>
5.3.6 Set up ground ladders	<input type="checkbox"/>	<input type="checkbox"/>
5.3.7 Attack a passenger vehicle fire operating as a member of a team	<input type="checkbox"/>	<input type="checkbox"/>
5.3.8 Extinguish fires in exterior Class A materials	<input type="checkbox"/>	<input type="checkbox"/>
5.3.9 Conduct a search and		

rescue in a structure operating as a member of a team	<input type="checkbox"/>	<input type="checkbox"/>
5.3.10 Attack an interior structure fire operating as a member of a team	<input type="checkbox"/>	<input type="checkbox"/>
5.3.11 Perform horizontal ventilation on a structure operating as part of a team	<input type="checkbox"/>	<input type="checkbox"/>
5.3.12 Perform vertical ventilation on a structure as part of a team	<input type="checkbox"/>	<input type="checkbox"/>
5.3.13 Overhaul a fire scene	<input type="checkbox"/>	<input type="checkbox"/>
5.3.14 Conserve property as a member of a team	<input type="checkbox"/>	<input type="checkbox"/>
5.3.15 Connect a fire department pumper to a water supply as part of a team	<input type="checkbox"/>	<input type="checkbox"/>
5.3.16 Extinguish incipient Class A, Class B, and Class C fires	<input type="checkbox"/>	<input type="checkbox"/>
5.3.17 Illuminate the emergency scene	<input type="checkbox"/>	<input type="checkbox"/>
5.3.18 Turn off building utilities	<input type="checkbox"/>	<input type="checkbox"/>
5.3.19 Combat a ground cover fire operating as a member of a team	<input type="checkbox"/>	<input type="checkbox"/>
5.3.20 Tie a knot appropriate for hoisting tool	<input type="checkbox"/>	<input type="checkbox"/>
5.5.1 Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment and hand tools	<input type="checkbox"/>	<input type="checkbox"/>
5.5.2 Clean, inspect, and return fire hose to service	<input type="checkbox"/>	<input type="checkbox"/>

Similarly, please indicate how much time (rounded to the nearest hour) was allotted to each JPR for theory training and practical skills training. This section is for the Fire Fighter II section, Chapter 6.

	Time on theory	Time on practice
6.2.1 Complete a basic incident report	<input type="checkbox"/>	<input type="checkbox"/>
6.2.2 Communicate the need for team assistance	<input type="checkbox"/>	<input type="checkbox"/>
6.3.1 Extinguish an ignitable liquid fire operating as a member of a team	<input type="checkbox"/>	<input type="checkbox"/>
6.3.2 Coordinate an interior attack line for a team's accomplishment of an assignment in a structure fire	<input type="checkbox"/>	<input type="checkbox"/>
6.3.3 Control a flammable gas cylinder fire, operating as a member of a team	<input type="checkbox"/>	<input type="checkbox"/>
6.3.4 Protect evidence of fire cause and origin	<input type="checkbox"/>	<input type="checkbox"/>
6.4.1 Extricate a victim entrapped in a motor vehicle as	<input type="checkbox"/>	<input type="checkbox"/>

part of a team		
6.4.2 Assist rescue operation teams	<input type="checkbox"/>	<input type="checkbox"/>
6.5.1 Perform a fire safety survey in an occupied structure	<input type="checkbox"/>	<input type="checkbox"/>
6.5.2 Present fire safety information to station visitors or small groups	<input type="checkbox"/>	<input type="checkbox"/>
6.5.3 Prepare a preincident survey	<input type="checkbox"/>	<input type="checkbox"/>
6.5.4 Maintain power plants, power tools, and lighting equipment	<input type="checkbox"/>	<input type="checkbox"/>
6.5.5 Perform an annual service test on fire hose	<input type="checkbox"/>	<input type="checkbox"/>

Finally, please indicate the amount of time (rounded to the nearest hour) spent on each component of the HAZMAT course.

	Time on theory	Time on practice
HAZMAT Awareness	<input type="checkbox"/>	<input type="checkbox"/>
HAZMAT Operations	<input type="checkbox"/>	<input type="checkbox"/>

Feel free to leave any additional comments you have about the training requirements as defined in the NFPA 1001 standard.

C Firefighter I JPR Hour Breakdown

Table C1: Breakdown of the number of hours spent on each JPR as listed in NFPA 1001

Job Performance Requirement		Number of hours*			
		Average	Min	Max	Total
5.2.1	Initiate the response to a reported emergency	0.8 0.5	0.25 0	1 1	1.3
5.2.2	Receive a telephone call	0.7 0.4	0.25 0	1 1	1.1
5.2.3	Transmit and receive messages via the fire department radio	1.6 2.4	0.25 0	4 8	3.9
5.3.1	Use self-contained breathing apparatus (SCBA) during emergency operations	3.4 13.5	1.5 6	4 24	16.9
5.3.2	Respond on an apparatus to an emergency scene	0.7 0.5	0.25 0	1 1	1.2
5.3.3	Establish and operate in work areas at emergency scenes	0.9 0.9	0.5 0	1 1.5	1.8
5.3.4	Force entry into a structure	3 5.8	2 3	4 8	8.8
5.3.5	Exit a hazardous area as a team	1.1 4.3	0.25 2	2 9	5.3
5.3.6	Set up ground ladders	2.4 12.3	1 3	4 36	14.6
5.3.7	Attack a passenger vehicle fire operating as a member of a team	1.4 3.8	0.5 3	3 5	5.1
5.3.8	Extinguish fires in exterior Class A materials	1.4 5	0.5 3	2 7	6.4
5.3.9	Conduct a search and rescue in a structure operating as a member of a team	1.9 6.1	1.5 2.5	2 8	8
5.3.10	Attack an interior structure fire operating as a member of a team	2.8 11.5	2 3	4 20	14.3
5.3.11	Perform horizontal ventilation on a structure operating as part of a team	1.6 5.6	0.5 0.25	3 15	7.2

*Top number represents the total hours spent on theory while the bottom number represents the total hours spent on practice.

Table C1: Continued

Job Performance Requirement		Number of hours			
		Average	Min	Max	Total
5.3.12	Perform vertical ventilation on a structure as part of a team	2.1	0.5	4	9
		6.9	0.5	15	
5.3.13	Overhaul a fire scene	1.7	0.75	3	3.6
		1.9	0.5	4	
5.3.14	Conserve property as a member of a team	1.6	0.5	3	4.4
		2.8	0.25	8	
5.3.15	Connect a fire department pumper to a water supply as part of a team	1.8	1	3	5.1
		3.4	0.5	6	
5.3.16	Extinguish incipient Class A, Class B, and Class C fires	2.1	2	2.5	5.3
		3.1	0.5	5	
5.3.17	Illuminate the emergency scene	0.8	0.25	1	2.6
		1.8	0.25	3	
5.3.18	Turn off building utilities	0.9	0.25	1.5	3
		2.1	0.25	6	
5.3.19	Combat a ground cover fire operating as a member of a team	8.8	0.25	32	15.8
		7	0	24	
5.3.20	Tie a knot appropriate for hoisting tool	2.3	2	3	7
		4.8	1	8	
5.5.1	Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment and hand tools	1.9	0.5	4	5.2
		3.3	0.25	8	
5.5.2	Clean, inspect, and return fire hose to service	0.8	0.25	1	3.9
		3.1	0.25	8	

D Firefighter II JPR Hour Breakdown

Table D1: Breakdown of the number of hours spent on each JPR as listed in NFPA 1001

Job Performance Requirement	Number of hours*			
	Average	Min	Max	Total
6.2.1 Complete a basic incident report	1.8	1	4	3
	1.3	1	2	
6.2.2 Communicate the need for team assistance	1.8	1	4	4.5
	2.8	0	8	
6.3.1 Extinguish an ignitable liquid fire, operating as a member of a team	3.3	2	4	11
	7.8	3	12	
6.3.2 Coordinate an interior attack line for a team's accomplishment of an assignment in a structure fire	4.8	2	8	23.5
	18.8	2	42	
6.3.3 Control a flammable gas cylinder fire, operating as a member of a team	2.8	2	4	6.8
	4	3	5	
6.3.4 Protect evidence of fire cause and origin	2	1	3	3
	1	0	2	
6.4.1 Extricate a victim entrapped in a motor vehicle as part of a team	3.8	2	8	9.5
	5.8	3	8	
6.4.2 Assist rescue operation teams	2.8	1	4	4.5
	1.8	1	4	
6.5.1 Perform a fire safety survey in an occupied structure	1.3	1	2	2
	0.8	0	2	
6.5.2 Present fire safety information to station visitors or small groups	1.3	1	2	3.8
	2.5	0	4	
6.5.3 Prepare a preincident survey	2.5	1	5	4.3
	1.8	0	4	
6.5.4 Maintain power plants, power tools, and lighting equipment	1.5	1	2	4.3
	2.8	0	8	
6.5.5 Perform an annual service test on fire hose	1.3	1	2	4
	2.8	1	6	

*Top number represents the total hours spent on theory while the bottom number represents the total hours spent on practice.

E HAZMAT Hours

Table E1: Breakdown of the number of hours spent on each section of NFPA 472

NFPA 472 Section	Number of hours*			
	Average	Min	Max	Total
6.5.5 HAZMAT Awareness	7.2	3	11	9.0
	1.8	0	8	
6.5.5 HAZMAT Operations	13.2	4	24	19.0
	5.8	0	12	

*Top number represents the total hours spent on theory while the bottom number represents the total hours spent on practice.

F Summary of Respondent Comments

Peter Silva, Jr.

Wisconsin Technical College System

“I’m sorry to have not filled in the individual boxes for the breakdown of FFI & II. We follow the syllabi provided by either IFSTA or Jone’s & Bartlett. Since the classes are broken down into either 3 or 4 hour modules, there are going to be differences in the times for each JPR.”

Trent Catley

Saskatchewan Office of the Fire Commissioner

“In Saskatchewan certification is separate from training. It is the responsibility of each fire department to arrange for their training however they see fit. Once they have completed their training the fire department contacts the Sk Office of the Fire Commissioner who then conducts written and practical evaluations for certification.”

Michael Caviness

North Carolina Office of State Fire Marshal

“I would have to say that my estimates are probably inaccurate because we combined so many skills through scenario based training that required the mastery of multiple skills and the application of those skills. The hours provided are a more accurate picture of initial skill training and exposure as opposed to the mastery level knowledge that we required. Much more time was spent on combining the skills.”

Mark Romer

California State Fire Marshal’s Office

“The State of California combines NFPA 1001 Firefighter 1 along with NFPA 1051 Wildland Firefighter1 and NFPA 472 First Responder Operations all together to make up the States firefighter 1 certification.”

Howard Scartozzi

Washington Chief Deputy State Fire Marshal

“All Basic JPR’s listed are visited formally and revisited many times throughout the Training. Hours listed are base hours, there is many more hours of practice not indicated in the numbers above.”