



DEPARTMENT OF FINANCIAL SERVICES

Division of State Fire Marshal
Bureau of Fire Standards & Training

**Analytical Approaches to Public Fire Protection
Syllabus**

Course Title	Analytical Approaches to Public Fire Protection
Course Number	BFST3780 or
Prerequisite(s)	Fire Officer II
Revision Date	October 09, 2017
College Credit Recommendation	This course has a combined total of 45 contact hours, with a recommendation for 3 credits
Continuing Education Units (CEU's)	None
Class Days/Time	Monday-Friday 08:00-17:00
Executive Development Program Supervisor	Patrick Giacobbe patrick.giacobbe@myfloridacfo.com
Program Manager	Mary-Ellen Harper Mary-Ellen.Harper@myfloridacfo.com
Instructor Qualifications	69A-37.059(4), F.A.C. 3. Instructor Qualifications. An instructor providing training under this paragraph (a) must be qualified by the Bureau of Fire Standards and Training within the Division. Qualified instructors are: a. Instructors with requisite faculty credentials for the academic institution that is registered in the Florida Department of Education Statewide Course Numbering System to teach the course; or b. Instructors with requisite faculty credentials as determined by the United States Fire Administration – National Fire Academy; or c. Instructors with requisite faculty credentials as determined by the respective regionally accredited or nationally accredited university or college; or d. Instructors who hold an active Single Course Exemption Certification issued by the Division as outlined in subsection 69A-37.059(4), F.A.C.; or e. Instructors who hold an active Fire Officer II Certification issued by the Division after November 18, 2013 and an active Instructor II Certification issued by the Division. f. Instructors who hold an active Firesafety Inspector I, Firesafety Inspector II, or Fire Code Administrator Certification issued by the Division and an active Instructor II Certification issued by the Division may teach the course “Building Construction for the Fire Service.”

THE BUREAU OF FIRE STANDARDS & TRAINING
AT
The Florida State Fire College
11655 NW GAINESVILLE ROAD • OCALA FLORIDA • 34482-1486
352.369.2800 • WWW.FLORIDASTATEFIRECOLLEGE.ORG

<i>Class Location</i>	FSFC								
<i>Course Description</i>	Course Description: This course examines the tools and techniques of rational decision making in fire and emergency services agencies, including data collection, statistics, probability, decision analysis, utility modeling, resource allocation, and cost-benefit analysis. There is a heavy focus on the identification of issues confronting the department and area served. During this course the student will select an issue, research options and possible solutions, gather data, design an action plan, and build a presentation for formal delivery to address the selected item.								
<i>Student Learning Outcomes</i>	<ol style="list-style-type: none"> 1. Discuss the uses of analytical approaches to rational decision making 2. Differentiate techniques of analysis 3. Select appropriate analytic tools to support critical thinking 4. Discuss how the use of databases, histograms, inferential statistics and probabilities and GIS are used in fire station location planning 5. Apply the cost-benefit analysis process to justify essential budgetary needs 								
<i>Required and Optional Textbook</i>	<i>Fire Data Analysis Handbook</i> , 2nd ed., (2004) U.S. Fire Administration								
<i>Required Materials</i>	Textbook, Pen , Paper Pencil, Computer access, Thumb Drive								
<i>Method of Instruction</i>	Classroom Lecture, Practical Evaluations, On-Line, Blended Learning								
<i>Grading</i>	Passing 70% 20%: Class Participation and Discussion 20%: Homework 20%: Project Presentation 10%: Quiz 30%: Final Exam								
<i>Certification(s)</i>	One of 5 required courses for Fire Officer III qualifications <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">RN9641</td> <td>ANALYTICAL APPROACHES TO PUBLIC FIRE PROTECTION</td> </tr> <tr> <td>RN9516 / FFP3785</td> <td>CHIEF OFFICER</td> </tr> <tr> <td>RN4807</td> <td>COURAGE TO BE SAFE</td> </tr> <tr> <td>FFP2770</td> <td>ETHICAL & LEGAL ISSUES FOR THE FIRE SERV</td> </tr> </table>	RN9641	ANALYTICAL APPROACHES TO PUBLIC FIRE PROTECTION	RN9516 / FFP3785	CHIEF OFFICER	RN4807	COURAGE TO BE SAFE	FFP2770	ETHICAL & LEGAL ISSUES FOR THE FIRE SERV
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	<p>PD4023 NFA ICS-400 (H467) ADVANCED ICS FOR COMMAND & GENERAL STAFF, COMPLEX INCIDENTS & MACS FOR 1ST RESPONDERS</p>
<p><i>Attendance Policy</i></p>	<p>You are required to attend all sessions of the course and complete all pre-course assignments. Failure to appear in class for a scheduled activity will be considered an absence unless you make arrangements with the instructor for a make-up session. Failure to make up missed sessions prior to the next session will result in an absence. Students are allowed to miss 10% of the class and still receive credit.</p>
<p><i>Academic Integrity</i></p>	<p>Academic integrity is crucial to the learning community and indicates respect for the college, the instructor, the course, your classmates and yourself. Any violation of this trust, including but not limited to cheating, plagiarism, collusion, or using or having any content of an un-administered test, will result in immediate dismissal from the course. Under Florida Statute 633, any student dismissed for academic dishonesty can be refused acceptance for any course administered by FSFC.</p> <p>Training Provider Message The course must be recognized by the Fire and Emergency Services Higher Education program or the course is determined by the Division to be equivalent to the Statewide Course Numbering System or Fire and Emergency Services Higher Education course.</p> <p>Instructor Message An instructor providing training must be qualified by the Bureau of Fire Standards and Training or instructors with requisite faculty credentials for the academic institution that is registered in the Florida Department of Education Statewide Course Numbering System to teach the course or instructors with requisite faculty credentials as determined by the United States Fire Administration-National Fire Academy or instructors with requisite faculty credentials as determined by the respective regionally accredited or nationally accredited university or college or instructors who hold an active Single Course Exemption Certification issued by the Division. Instructors who hold an active Fire Officer II Certification issued by the Division after November 18, 2013, and an active Instructor II Certification issued by the Division. Instructors who hold an active Firesafety Inspector I, Firesafety Inspector II or Fire Code Administrator Certification issued by the Division and an Instructor II Certification issued by the Division may teach the</p>

	<p style="text-align: center;">"Building Construction for the Fire Service."</p> <p>Pre-Certification Message</p> <p>There are two methods available to qualify for Fire Officer III certification. First option: designed for persons who have at least five years of full time equivalent experience as a Florida certified Fire Officer. Possess an active firefighter certificate of compliance issued by the Division or have met the curriculum requirements for Volunteer firefighter. Possess an active Instructor I certificate of competency issued by the Division. Possess an active Fire Officer I or II certificate of competency issued by the Division prior to November 18, 2013. Meet the job performance requirements of NFPA 1021-Fire Officer III (2009). Complete the Fire Officer III Curriculum. Complete the prerequisite course titled "ICS-400: Advanced ICS Command and General Staff: Complex Incidents" or a course determined by the Division to be equivalent. Pass the Fire Officer III Exam with a score of 70% or higher. Complete the National Fallen Firefighters Foundation course titled "Courage to Be Safe" or a course determined by the Division to be equivalent. Second option: Portfolio Program. Designed for persons who have at least five years of full time equivalent experience as a Florida certified Fire Officer. Applicant must hold an active Firefighter Certificate of Compliance issued by the Division or have met the curriculum requirements for Volunteer Firefighter. Hold an active Instructor I certificate of competency issued by the Division. Hold an active Fire Officer I or II certificate of competency issued by the Division prior to November 18, 2013 or hold an active Fire Officer II certificate of competency issued by the Division after November 18, 2013. Meet the program prerequisites, the objectives required by the NFPA 1021 Fire Officer III standard and the Fire Officer III curriculum as evidenced in the Fire Officer III Portfolio. Pass the Fire Officer III exam with a score of 70% or higher. When taking a state exam, please ensure that your personal profile matches their identification that you plan to produce at Pearsonvue.</p>
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<i>Students with Disabilities</i>	Any student who has a permanent or temporary disability that may require a reasonable accommodation to participate in the course must present documentation of the disability and requested accommodation no later than the beginning of the course.
<i>Emergency Evacuation Policy</i>	<p>Occupants of buildings on the Florida State Fire College campus are required to evacuate and assemble outside when a fire alarm is activated or an announcement is made. Please be aware of the following policies regarding evacuation.</p> <ul style="list-style-type: none"> • Familiarize yourself with all exit doors of the classroom and the building. • Remember that the nearest exit door may not be the one you used when you entered the building. • If you require assistance to evacuate, inform the instructor on the first day of class. • In the event of an evacuation, follow the guidance of the instructor. • Do not re-enter a building unless you are given instructions by Florida State Fire College personnel to do so.
<i>Requesting Emergency Care</i>	Any request for emergency care should be initiated by calling “911” from any phone on campus of the Florida State Fire College. Phones are located in each classroom. Additionally, in the event of any emergency, immediately contact an instructor or staff member.
<i>Critical Event Procedures</i>	<p>Severe Weather – there is a lightning detection system on campus which has an audible 15 second blast of an air horn. If you are outside, please follow your instructor or move to the closest permanent building. Once the threat is over, there will be three 5 second blasts of the signal.</p> <p>Security – During the daytime, security is handled by full time faculty and staff. There are security guards on duty in the evenings and weekends. Please comply with the requests made of security officers. Failure to do so can result in removal from campus.</p> <p>Student Badges – You will be issued a badge to be worn anytime you are on campus.</p>
<i>Enabling Objectives</i>	<ul style="list-style-type: none"> • Discuss the uses of analytical approaches to rational decision making • Differentiate techniques of analysis • Select appropriate analytic tools to support critical thinking • Discuss how the use of databases, histograms, inferential statistics and probabilities and GIS are used in fire station location planning • Apply the cost-benefit analysis process to justify essential budgetary needs

Practical Applications

The student shall demonstrate mastery of the following NFPA 1021 (2014) JPRs :

Fire Officer III

6.1 General. For qualification at Fire Officer Level III, the Fire Officer II shall meet the requirements of Fire Instructor Level II as defined in NFPA 1041 and the job performance requirements defined in Sections 6.2 through 6.8 of this standard.

6.1.1 General Prerequisite Knowledge. Current national and international trends and developments related to fire service organization, management, and administrative principles;
FIRE OFFICER III 1021–11

2014 Edition

public and private organizations that support the fire and emergency services and the functions of each.

6.1.2 General Prerequisite Skills. The ability to research, to use evaluative methods, to analyze data, to communicate orally and in writing, and to motivate members.

6.2 Human Resource Management. This duty involves establishing procedures for hiring, assigning, promoting, and encouraging professional development of members, according to the following job performance requirements.

6.2.1 Establish personnel assignments to maximize efficiency, given knowledge, training, and experience of the members available in accordance with policies and procedures.

(A) Requisite Knowledge. Minimum staffing requirements, available human resources, and policies and procedures.

(B) Requisite Skills. The ability to relate interpersonally and to communicate orally and in writing.

6.2.2 Develop procedures for hiring members, given policies of the AHJ and legal requirements, so that the process is valid and reliable.

(A) Requisite Knowledge. Applicable federal, state/provincial, and local laws; regulations and standards; and policies and procedures.

(B) Requisite Skills. The ability to communicate orally and in writing.

6.2.3 Develop procedures and programs for promoting members, given applicable policies and legal requirements, so that the process is valid and reliable, job-related, and nondiscriminatory.

(A) Requisite Knowledge. Applicable federal, state/provincial, and local laws; regulations and standards; and policies and

	<p>procedures.</p> <p>(B) Requisite Skills. The ability to communicate orally and in writing, to encourage professional development, and to mentor members.</p> <p>6.2.4 Describe methods to facilitate and encourage members to participate in professional development to achieve their full potential.</p> <p>(A) Requisite Knowledge. Interpersonal and motivational techniques.</p> <p>(B) Requisite Skills. The ability to evaluate potential, to communicate orally, and to counsel members.</p> <p>6.2.5 Develop a proposal for improving an employee benefit, given a need in the organization, so that adequate information is included to justify the requested benefit improvement.</p> <p>(A) Required Knowledge. Agency’s benefit program.</p> <p>(B) Required Skills. The ability to conduct research and to communicate orally and in writing.</p> <p>6.2.6 Develop a plan for providing an employee accommodation, given an employee need, the requirements, and applicable law, so that adequate information is included to justify the requested change(s).</p> <p>(A) Required Knowledge. Agency’s policies and procedures, and legal requirements or reasonable accommodations.</p> <p>(B) Required Skills. The ability to conduct research and to communicate orally and in writing.</p> <p>6.2.7 Develop an ongoing education training program, given organizational training requirements, so that members of the organization are given appropriate training to meet the mission of the organization.</p> <p>(A) Required Knowledge. Agency mission and goals, training program development, and needs assessment.</p> <p>(B) Required Skills. Ability to perform a needs assessment and to communicate orally and in writing.</p> <p>6.3 Community and Government Relations. This duty involves developing programs that improve and expand service and build partnerships with the public, according to the following job performance requirements.</p> <p>6.3.1 Prepare community awareness programs to enhance the quality of life by developing nontraditional services that provide for increased safety, injury prevention, and convenient public services.</p> <p>(A) Requisite Knowledge. Community demographics, resource availability, community needs, and customer service</p>
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	<p>principles.</p> <p>(B) Requisite Skills. The ability to relate interpersonally and to communicate orally and in writing.</p> <p>6.4 Administration. This duty involves preparing a divisional or departmental budget, developing a budget management system, soliciting bids, planning for resource allocation, and working with records management systems, according to the following job performance requirements.</p> <p>6.4.1 Develop a divisional or departmental budget, given schedules and guidelines concerning its preparation, so that capital, operating, and personnel costs are determined and justified.</p> <p>(A) Requisite Knowledge. The supplies and equipment necessary for existing and new programs; repairs to existing facilities; new equipment, apparatus maintenance, and personnel costs; and approved budgeting system.</p> <p>(B) Requisite Skills. The ability to allocate finances, to relate interpersonally, and to communicate orally and in writing.</p> <p>6.4.2* Develop a budget management system, given fiscal and financial policies, so that the division or department stays within the budgetary authority.</p> <p>(A) Requisite Knowledge. Revenue to date, anticipated revenue, expenditures to date, encumbered amounts, and anticipated expenditures.</p> <p>(B) Requisite Skills. The ability to interpret financial data and to communicate orally and in writing.</p> <p>6.4.3 Describe the agency’s process for developing requests for proposal (RFPs) and soliciting and awarding bids, given established specifications and the agency’s policies and procedures, so that competitive bidding is ensured.</p> <p>(A) Requisite Knowledge. Purchasing laws, policies, and procedures.</p> <p>(B) Requisite Skills. The ability to use evaluative methods and to communicate orally and in writing.</p> <p>6.4.4 Direct the development, maintenance, and evaluation of a department record and management system, given policies and procedures, so that completeness and accuracy are achieved.</p> <p>1021–12 FIRE OFFICER PROFESSIONAL QUALIFICATIONS {10B52FDA-4C5B-4FEB-A372-03A358C791DC}</p> <p>(A) Requisite Knowledge. The principles involved in the acquisition, implementation, and retrieval of information by data processing as it applies to the record and budgetary processes and the capabilities and limitations of information management</p>
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	<p>systems.</p> <p>(B) Requisite Skills. The ability to use evaluative methods, to communicate orally and in writing, and to organize data.</p> <p>6.4.5 Analyze and interpret records and data, given a fire department records system, so that validity is determined and improvements are recommended.</p> <p>(A) Requisite Knowledge. The principles involved in the acquisition, implementation, and retrieval of information and data.</p> <p>(B) Requisite Skills. The ability to use evaluative methods, to communicate orally and in writing, and to organize and analyze data.</p> <p>6.4.6* Develop a model plan for continuous organizational improvement, given resources for an area to be protected, so that resource utilization is maximized.</p> <p>(A) Requisite Knowledge. Policies and procedures, physical and geographic characteristics and hazards, demographics, community plan, staffing requirements, response time benchmarks, contractual agreements, recognized best practice assessment programs, and local, state/provincial, and federal regulations.</p> <p>(B) Requisite Skills. The ability to research, to use evaluative methods, to analyze data, to communicate orally and in writing, and to organize.</p> <p>6.5 Inspection and Investigation. This duty involves evaluating inspection programs of the AHJ to determine effectiveness and developing public safety plans, according to the following job performance requirements.</p> <p>6.5.1 Evaluate the inspection program of the AHJ, given current program goals, objectives, performance data, and resources so that the results are evaluated to determine effectiveness.</p> <p>(A) Requisite Knowledge. Policies and procedures, accepted inspection practices, program evaluation, and applicable codes, standards, and laws.</p> <p>(B) Requisite Skills. The ability to use evaluative methods, to analyze data, and to communicate orally and in writing.</p> <p>6.5.2 Develop a plan, given an identified fire safety problem, so that the approval for a new program, piece of legislation, form of public education, or fire safety code is facilitated.</p> <p>(A) Requisite Knowledge. Policies and procedures and applicable codes, ordinances, and standards and their development process.</p> <p>(B) Requisite Skills. The ability to use evaluative methods, to</p>
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	<p>use consensus-building techniques, to communicate orally and in writing, and to organize plans.</p> <p>6.6 Emergency Service Delivery. This duty involves managing multi-agency planning, deployment, and operations, according to the following job performance requirements.</p> <p>6.6.1 Prepare an action plan, given an emergency incident requiring multiple agency operations, so that the required resources are determined and the resources are assigned and placed to mitigate the incident.</p> <p>(A) Requisite Knowledge. Policies, procedures, and standards, including the current edition of NFPA 1600, and resources, capabilities, roles, responsibilities, and authority of support agencies.</p> <p>(B) Requisite Skills. The ability to use evaluative methods, to delegate authority, to communicate orally and in writing, and to organize plans.</p> <p>6.6.2 Develop and conduct a post-incident analysis, given a multi-agency incident and post-incident analysis policies, procedures, and forms, so that all required critical elements are identified and communicated and the appropriate forms are completed and processed in accordance with policies and procedures.</p> <p>(A) Requisite Knowledge. Elements of a post-incident analysis, emergency management plan, critical issues, involved agencies' resources and responsibilities, procedures relating to dispatch response, strategy tactics and operations, and customer service.</p> <p>(B) Requisite Skills. The ability to write reports, to communicate orally, and to evaluate skills.</p> <p>6.6.3 Develop a plan for the agency, given an unmet need for resources that exceed what is available in the organization, so that the mission of the organization is capable of being performed in times of extraordinary need.</p> <p>(A) Requisite Knowledge. Needs assessment and planning.</p> <p>(B) Requisite Skills. The ability to conduct a needs assessment, evaluate external resources, and develop a plan.</p> <p>6.7 Health and Safety. This duty involves developing, managing, and evaluating a departmental health and safety program, according to the following job performance requirements.</p> <p>6.7.1 Develop a measurable accident and injury prevention program, given relevant local and national data, so that the results are evaluated to determine effectiveness of the program.</p> <p>(A) Requisite Knowledge. Policies and procedures, accepted</p>
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	<p>safety practices, and applicable codes, standards, and laws.</p> <p>(B) Requisite Skills. The ability to use evaluative methods, to analyze data, and to communicate orally and in writing.</p> <p>6.8 Emergency Management. This duty involves policies, procedures, and programs for the role of the fire service in the community's emergency management plan; roles of local, state/provincial, and national emergency management agencies.</p> <p>6.8.1 Develop a plan for the integration of fire services resources in the community's emergency management plan, given the requirements of the community and the resources available in the fire department, so that the role of the fire service is in compliance with local, state/provincial, and national requirements.</p> <p>(A) Required Knowledge. Role of the fire service; integrated emergency management system; preparedness-emergency management planning; emergency operations centers; roles of local, state/provincial, and national emergency management agencies.</p> <p>(B) Required Skills. The ability to communicate orally and in writing and to organize a plan; and familiarity with emergency management inter-agency planning and coordination.</p> <p>FIRE OFFICER III 1021-13 2009 Edition</p> <p>7.2.1 Appraise the department's human resource demographics, given appropriate community demographic data, to determine if the recruitment, selection, and placement of human resources is effective and consistent with law and current best practices.</p> <p>(A) Requisite Knowledge. Policies and procedures; local, state/provincial, and federal regulations; community demographics; community issues; and formal and informal community leaders.</p> <p>(B) Requisite Skills. The ability to communicate orally and in writing, to relate interpersonally, to delegate authority, to analyze issues, and to solve problems.</p> <p>7.2.2 Evaluate current employee/management relations and initiate the development of a process that supports a positive and participative employee/management program.</p> <p>(A) Requisite Knowledge. Policies and procedures, contractual agreements, and local, state/provincial, and federal regulations.</p> <p>(B) Requisite Skills. The ability to communicate orally and in writing, to negotiate, to analyze current status of employee</p>
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	<p>relations, to relate interpersonally, to analyze the current employee/management relations, and to conduct program implementation.</p> <p>7.2.3 Establish and evaluate a list of education and in-service training goals, given a summary of the job requirements for all positions within the department, so that all members can achieve and maintain required proficiencies.</p> <p>(A) Requisite Knowledge. Training resources, community needs, internal and external customers, policies and procedures, contractual agreements, and local, state/provincial, and federal regulations.</p> <p>(B) Requisite Skills. The ability to communicate orally and in writing and to organize data and resources.</p> <p>7.2.4 Appraise a member-assistance program, given data, to determine if the program, when used, produces the desired results and benefits.</p> <p>(A) Requisite Knowledge. Policies and procedures, available assistance programs, contractual agreements, and local, state/provincial, and federal regulations.</p> <p>(B) Requisite Skills. The ability to communicate orally and in writing, to relate interpersonally to members, and to analyze needs and results.</p> <p>7.2.5 Evaluate an incentive program, given data, so that a determination is made regarding achievement of the desired results.</p> <p>(A) Requisite Knowledge. Policies and procedures, available incentive programs, contractual agreements, and local, state/provincial, and federal regulations.</p> <p>(B) Requisite Skills. The ability to communicate orally and in writing, to relate interpersonally, and to analyze programs.</p> <p>7.3 Community and Government Relations. This duty involves projecting a positive image of the fire department to the community, according to the following job performance requirements.</p> <p>7.3.1 Attend, participate in, and assume a leadership role in given community events in order to understand and respond to community needs and enhance the image of the fire department.</p> <p>(A) Requisite Knowledge. Community demographics, community and civic issues, effective customer service methods, and formal and informal community leaders.</p> <p>(B) Requisite Skills. The ability to communicate orally and familiarity with public relations.</p> <p>7.4 Administration. This duty involves long-range planning and fiscal projections, according to the following job performance</p>
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	<p>requirements.</p> <p>7.4.1 Develop a comprehensive long-range plan, given community requirements, current department status, and resources, so that the projected needs of the community are met.</p> <p>(A) Requisite Knowledge. Policies and procedures, physical and geographic characteristics, demographics, community plan, staffing requirements, response time benchmarks, contractual agreements, and local, state/provincial, and federal regulations.</p> <p>(B) Requisite Skills. The ability to communicate orally and in writing and familiarity with fiscal analysis, public policy processes, forecasting resources, and analyzing current department status requirements.</p> <p>7.4.2 Evaluate and project training requirements, facilities, and buildings needs, given data that reflect community needs and resources, to meet departmental training goals.</p> <p>(A) Requisite Knowledge. Policies and procedures, physical and geographic characteristics, building and fire codes, departmental plan, staffing requirements, training standards, needs assessment, contractual agreements, and local, state/provincial, and federal regulations.</p> <p>(B) Requisite Skills. The ability to communicate orally and in writing and familiarity with fiscal analysis, forecasting needs, and analyzing data.</p> <p>7.4.3 Complete a written comprehensive risk, hazard, and value analysis of the community, given the appropriate features of the service area of the organization, so that an accurate evaluation is made for service delivery decision-making.</p> <p>(A) Requisite Knowledge. Risk, hazard, and value analysis methods and process, as well as community development features, community demographics, and assessed valuation of properties in the community.</p> <p>(B) Requisite Skills. The ability to conduct a needs assessment plan, to effectively communicate in writing, problem solving.</p> <p>7.4.4 Develop a plan for a capital improvement project or program, given an unmet need in the community, so that there is adequate information to educate citizens about the needs of the department.</p> <p>1021–14 FIRE OFFICER PROFESSIONAL QUALIFICATIONS 2014 Edition</p> <p>(A) Requisite Knowledge. Strategic planning, capital improvement</p>
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	<p>planning and budgeting, and facility planning.</p> <p>(B) Requisite Skills. The ability to conduct a needs assessment plan, to effectively communicate in writing, and problem solving.</p> <p>7.5 Inspection and Investigation.</p> <p>7.5.1 Definition of Duty. No additional job performance requirements at this level.</p> <p>7.6 Emergency Services Delivery. This duty involves developing plans for major disasters, according to the following job performance requirements.</p> <p>7.6.1 Develop a comprehensive disaster plan that integrates other agencies’ resources, given data, in order to rapidly and effectively mitigate the impact on a community.</p> <p>(A) Requisite Knowledge. Major incident policies and procedures, physical and geographic characteristics, demographics, target hazards, incident management systems, communications systems, contractual and mutual-aid agreements, and local, state/provincial, and federal regulations and resources.</p> <p>(B) Requisite Skills. The ability to communicate orally and in writing and to organize a disaster plan; familiarity with interagency planning and coordination.</p> <p>7.6.2 Develop a comprehensive plan, given data (including agency data), so that the agency operates at a civil disturbance, integrates with other agencies’ actions, and provides for the safety and protection of members.</p> <p>(A) Requisite Knowledge. Major incident policies and procedures, physical and geographic characteristics, demographics, incident management systems, communications systems, contractual and mutual-aid agreements, and local, state/provincial, and federal regulations and resources.</p> <p>(B) Requisite Skills. The ability to communicate orally and in writing and to organize a plan; familiarity with inter-agency planning and coordination.</p> <p>7.7 Health and Safety. This duty involves administering a comprehensive risk management program, according to the following job performance requirements.</p> <p>7.7.1 Maintain, develop, and provide leadership for a risk management program, given specific data, so that injuries and property damage accidents are reduced.</p> <p>(A) Requisite Knowledge. Risk management concepts, retirement qualifications, occupational hazards analysis, and disability procedures, regulations, and laws.</p> <p>(B) Requisite Skills. The ability to communicate orally and in</p>
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writing, to analyze data, and to use evaluative methods.

Annex A Explanatory Material

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.1.1 It is envisioned that in addition to the requirements of NFPA 1021, the authority having jurisdiction may require additional credentials. These can include fire degree programs and general education in business, management, science, and associated degree curricula.

A.1.3 Fire officers are expected to be ethical in their conduct. Ethical conduct includes being honest, doing “what’s right,” and performing to the best of one’s ability. For public safety personnel, ethical responsibility extends beyond one’s individual performance. In serving the citizens, public safety personnel are charged with the responsibility of ensuring the provision of the best possible safety and service.

Ethical conduct requires honesty on the part of all public safety personnel. Choices must be made on the basis of maximum benefit to the citizens and the community. The process of making these decisions must also be open to the public. The means of providing service, as well as the quality of the service provided, must be above question and must maximize the principles of fairness and equity as well as those of efficiency and effectiveness.

The International Association of Fire Chiefs Code of Ethics is just one example of general and professional codes of conduct available for reference.

A.1.3.4 Remaining current can be demonstrated by attending workshops, classes, and seminars; post-secondary education; certification; or accessing professional publications, journals, and web sites.

A.3.1 Definitions of action verbs used within this document are based on the first definition of the word found in *Webster’s Dictionary*.

A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of

such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

A.3.2.2 Authority Having Jurisdiction (AHJ). The phrase “authority having jurisdiction,” or its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

A.3.2.4 Listed. The means for identifying listed equipment may vary for each organization concerned with product evaluation; some organizations do not recognize equipment as listed unless it is also labeled. The authority having jurisdiction should utilize the system employed by the listing organization to identify a listed product.

ANNEX A 1021–15

2014 Edition

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A.3.3.1 Comprehensive Emergency Management Plan. In some jurisdictions, a comprehensive emergency management plan (CEMP) is also known as a disaster management plan or local emergency plan.

A.4.1 It is recognized that the job of Fire Officer may not be as physically demanding as that of a Fire Fighter. However, the physiological and emotional stress incurred by Fire Officers can still be significant. Therefore, it is recommended that physical fitness requirements for Fire Officer personnel be developed and validated by the AHJ.

A.4.2.4(A) Member-related problems could include substance abuse; acute, chronic, and delayed stress; and health,

financial, personal, family, and other situations that adversely affect the member's job performance.

A.4.2.5 The Fire Officer I should be able to deal with administrative procedures that might include transfers, promotions, compensation/member benefits, sick leave, vacation, requests for pay or benefits while acting in a temporary position, change in member benefits, commendations, disciplinary actions, and grievances.

A.4.5 The committee's intent is to instill an awareness of those areas that officers might address in the performance of their duties. Organizations that desire higher levels of competency in these areas should refer to the applicable NFPA professional qualifications standards: NFPA 1031 and NFPA 1033.

A.4.6 Emergency service delivery is the component of fire department organization providing mitigation of responses to emergency incidents, such as those involving fires, emergency medical situations, mass casualties, hazardous materials, weapons of mass destruction, and terrorism, as well as other emergency events.

A.4.6.1(A) Size-up includes the many variables that the officer observes from the time of the alarm, during response, and upon arrival in order to develop an initial action plan to control an emergency incident. These observations can include building type and occupancy, fire involvement, number of occupants, mechanism of injury, materials spilled or involved in fire, wind direction, topography, and demographics, among others.

A.4.6.2 This requirement takes into consideration the officer's ability to give orders, direct personnel, evaluate information, and allocate resources to respond to the wide variety of emergency situations the fire service encounters.

A.4.7 One of the fire officer's primary responsibilities is safety both on the fire ground and during normal operations. The fire officer must be cognizant that these operations can include risks and threats of intentional harm to personnel. This standard defines the minimum requirements for the fire officer. NFPA 1521 and applicable OSHA regulations define additional requirements for the officer who might be assigned those duties.

A.6.4.2 The following are some of the budgeting systems commonly used:

- (1) Planning programming budgeting system (PPBS)
- (2) Line item budgets

- (3) Zero-based budgeting (ZBB)
- (4) Program budgeting
- (5) Performance budgeting
- (6) Matrix budgets

A.6.4.6 The following are some examples of organizational evaluation systems:

- (1) Commission on Fire Accreditation International Self-Assessment Model
- (2) Insurance Service Organization Fire Service Rating Schedule

Annex B Explanation of the Standard and Concepts of JPRs

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

B.1 Explanation of the Standard and Concepts of Job Performance Requirements (JPRs). The primary benefit of establishing national professional qualifications standards is to provide both public and private sectors with a framework of the job requirements

for the fire service. Other benefits include enhancement of the profession, individual as well as organizational growth and development, and standardization of practices. NFPA professional qualifications standards identify the minimum JPRs for specific fire service positions. The standards can be used for training design and evaluation, certification, measuring and critiquing on-the-job performance, defining hiring practices, and setting organizational policies, procedures, and goals. (Other applications are encouraged.)

Professional qualifications standards for a specific job are organized by major areas of responsibility defined as duties. For example, the fire fighter’s duties might include fire suppression, rescue, and water supply; and the public fire educator’s duties might include education, planning and development, and administration. Duties are major functional areas of responsibility within a job.

The professional qualifications standards are written as JPRs. JPRs describe the performance required for a specific job. JPRs are grouped according to the duties of a job. The complete list of JPRs for each duty defines what an individual must be able to do in order to successfully perform that duty. Together, the duties and their JPRs define the job parameters; that is, the standard as a whole is a description of a job.

B.2 Breaking Down the Components of a JPR. The JPR is the

	<p>assembly of three critical components. (See Table B.2.) These components are as follows:</p> <ul style="list-style-type: none">(1) Task that is to be performed(2) Tools, equipment, or materials that must be provided to successfully complete the task(3) Evaluation parameters and/or performance outcomes <p>B.2.1 The Task to be Performed. The first component is a concise, brief statement of what the person is supposed to do.</p> <p>B.2.2 Tools, Equipment, or Materials that Must be Provided to Successfully Complete the Task. This component ensures that all individuals completing the task are given the same minimal tools, equipment, or materials when being evaluated. By listing these items, the performer and evaluator know what must be provided in order to complete the task.</p> <p>B.2.3 Evaluation Parameters and/or Performance Outcomes. This component defines how well one must perform each task — for both the performer and the evaluator. The JPR guides performance toward successful completion by identifying evaluation parameters and/or performance out of NFPA 1021 (2014)</p>
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Plan of Instruction

Course Topics and Objectives

I. Student/FSFC Orientation

II. Course introduction/Introduction to peers

III. Analytical thinking

- a. Articulate the importance of rational decision making and the analytical thinking that underlies that process.
- b. Given a scenario, determine which research methodology is most effective.
- c. Apply a system analysis approach and exercise techniques towards effective decision making and issue identification.
- d. Compare and contrast event and decision trees and how they aid in decision analysis while selecting multiple paths in the hypothesis program.
- e. Apply strategic planning concepts to decision making to meet internal and external goals of multiple stakeholders.

IV. Data collection

- a. Determine the differences between data and information.
- b. Identify the advantages and disadvantages of using internal and external databases.
- c. Analyze the structure, styles, types, and uses of databases.

V. Data presentation

- a. Develop graphs, charts, and tables, show the proper selection process of each.
- b. Interpret graphs, frequency charts, and histograms.

VI. Data calculation

- a. Measure the usefulness of means and standard deviations--the measures of centrality and spread.
- b. Analyze database design and develop descriptive statistics to address a range of fire and emergency services issues.

VII. Cost benefit analysis/Risk assessment

- a. Evaluate the basic assumptions of cost-benefit analyses.
- b. Examine steps of cost-benefit analyses.

VIII. ISO

- a. Demonstrate how the ISO Fire Suppression Rating Schedule is an example of utility modeling that can be used in the fire services.
- b. Resource allocation and ISO.

IX. GIS

- a. Evaluate how to implement GIS in an emergency service agency.
- b. Apply GIS to identify and evaluate a community's risk and hazard level.
- c. Resource allocation and GIS.

X. Putting it all together

XI. Project presentation

XII. Final exam

Final Project Assignment

Utilizing the information and knowledge obtained throughout this course, you will develop a ten minute presentation to be given on the last day of class, **Friday. It shall be a power point style of presentation.** Handouts and other associated documents are optional as you see fit to make the point of your presentation. Remember **YOU** are trying to **SELL** your point or idea to the audience you have selected.

Following the course outline, your presentation shall:

- Identify your organization and area demographics.
- Identify a problem/need/issue/concern/shortfall in your organization. It may be operational, staffing, logistics, equipment, fiscal, etc. Be creative!
- Develop and display your research methodology and hypothesis utilizing your choice of problem solving tree. Select a minimum of three possible solutions and explain the issues that coincide with each of them.
- Display your gathered, collected, compiled, and organized data, to be transformed into information to support your hypothesis and possible solution(s) [tables, charts, graphs, etc.].
- Display your final selected hypothesis, solving/rectifying/justifying your solution to your chosen introductory problem.
- Display your cost benefit analysis.
- Display your recommended solution and how it should be implemented. Select a **FINAL** idea and **SELL IT!!!!**
- Tailor the presentation to your choice audience (Mayor, Fire Chief, City Manager, Council, Board, Community leaders, Citizens, etc).
- All documentation shall be submitted with your final project to receive credit for project and final grade.



DEPARTMENT OF FINANCIAL SERVICES

*Division of State Fire Marshal
Bureau of Fire Standards & Training*

Grading Embedded Rubric for In Cass Presentation

Criteria	Excellent (5)	Very Good (4)	Good (3)	Needs work (2)	Inadequate (1)
Evaluate the practical elements of comprehensive Fire Department Management systems and application	Oral Presentation demonstrates an outstanding comprehension of comprehensive Fire Department Management systems and application.	Oral Presentation demonstrates very good comprehension of comprehensive Fire Department Management systems and application	Oral Presentation demonstrates good comprehension of comprehensive Fire Department Management systems and application	Oral Presentation demonstrates a comprehension of comprehensive Fire Department Management systems and application	Oral Presentation demonstrates little comprehension of comprehensive Fire Department Management systems and application
Evaluate the definition of statutes and ordinances for department creation	Oral Presentation reflects an outstanding understanding of definition of statutes and ordinances for department creation	Oral Presentation reflects a very good definition of statutes and ordinances for department creation.	Oral Presentation reflects a good understanding of definition of statutes and ordinances for department creation.	Oral Presentation reflects an understanding of definition of statutes and ordinances for department creation	Oral Presentation reflects very little understanding of definition of statutes and ordinances for department creation.

Analyze problems requiring strategic planning toward reasonable methods for solving organizational problems	Oral Presentation demonstrated outstanding ability to analyze problems requiring strategic planning toward reasonable methods for solving organizational problems	Oral Presentation demonstrated very good ability to analyze problems requiring strategic planning toward reasonable methods for solving organizational problems	Oral Presentation demonstrated good ability to analyze problems requiring strategic planning toward reasonable methods for solving organizational problems	Oral Presentation demonstrated some ability to analyze problems requiring strategic planning toward reasonable methods for solving organizational problems	Oral Presentation demonstrated very little ability to analyze problems requiring strategic planning toward reasonable methods for solving organizational problems
Demonstrate the skills necessary to evaluate decisions regarding change management in Fire Rescue abilities	Oral Presentation reflects an outstanding application of the skills necessary to evaluate decisions regarding change management in Fire Rescue abilities	Oral Presentation reflects a very good application of the skills necessary to evaluate decisions regarding change management in Fire Rescue abilities	Oral Presentation reflects a good application of the skills necessary to evaluate decisions regarding change management in Fire Rescue abilities	Oral Presentation reflects limited application of the skills necessary to evaluate decisions to regarding change management in Fire Rescue abilities	Oral Presentation reflects very little ability to apply the skills necessary to evaluate decisions to regarding change management in Fire Rescue abilities

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<p>Apply appropriate terminology, concepts, principles and analytic techniques used in change Management.</p>	<p>Oral Presentation demonstrates outstanding ability to apply appropriate terminology, concepts, principles and analytic techniques used in change management and strategic planning.</p>	<p>Oral Presentation demonstrates very good ability to apply appropriate terminology, concepts, principles and analytic techniques used in change management and strategic planning</p>	<p>Oral Presentation demonstrates good ability to apply appropriate terminology, concepts, principles and analytic techniques used in change management and strategic planning</p>	<p>Oral Presentation demonstrates limited ability to apply appropriate terminology, concepts, principles and analytic techniques used in change management and strategic planning.</p>	<p>Oral Presentation demonstrates little ability to apply appropriate terminology, concepts, principles and analytic techniques used in change management and strategic planning</p>
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