



FLORIDA DEPARTMENT OF FINANCIAL SERVICES
Division of State Fire Marshal
Bureau of Fire Standards and Training
11655 N.W. Gainesville Road
Ocala, FL 34482-1486

BFST9884

Quantitative Analysis

Course Curriculum

Revision Date: March 27, 2018

This course is managed by The Executive Development Program Section

Patrick Giacobbe, Executive Development Programs Supervisor

Phone: 352.369.2809

Email: Patrick.Giacobbe@MyFloridaCFO.com

Course Overview

This course provides theory, techniques, and tools to support and facilitate managerial decision-making. Includes financial, statistical, and operational modelling.

This course meets or exceeds the requirements of the NFPA 1021, "Standard for Fire Officer Professional Qualifications," (2014 Edition), and Rule 69A-37.065(2)(d), Florida Administrative Code.

Course Objectives

This course provides theory, techniques, and tools to support and facilitate managerial decision-making. Includes financial, statistical, and operational modelling.

Course Requirements

The successful student will demonstrate proficiency of the established objectives and job performance requirements by participating in a variety of class discussions and activities and demonstrate mastery of the course content through a combination of quizzes, tests, papers, projects and / or presentations as assigned by the course instructor.

Contact Hours

This course requires 45 contact hours.

Certification Program

This course is part of the Fire Officer IV Certification Program.

Continuing Education Credits

Approved for 45 CEUs toward Fire Instructor.

Instructor Qualifications:

Per Rule Code 69A-37.065, Florida Administrative Code.



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Recommended Textbook

Research Methodology: *A Step-by-Step Guide for Beginners*, Fourth Edition by Ranjit Kumar

Recommended Practical Applications

The Bureau of Fire Standards and Training (BFST) recommends using real data in all course deliveries whenever feasible. Consistent with the dynamic needs of the Florida Fire Service, practical applications for this course should include projects, case studies, activities, and experiences that are appropriate to the given course including, but not limited to:

1. “The 16 Firefighter Life Safety Initiatives” established by the National Fallen Fire Fighters Foundation (NFFF).
2. The Florida Fire Incident Reporting System (FFIRS) and National Incident Fire Reporting System (NFIRS).

Fire Officer IV Job Performance Requirements

The bolded and underlined Job Performance Requirements (JPRs) are addressed in this course curriculum.

JPRS not underlined are addressed in the course listed under “Associated BFST Course.”

NFPA 1021 Standard for Fire Officer Professional Qualifications, 2014 Edition

Job Performance Requirement

Associated BFST Course

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| 7.1 General. For qualification at Fire Officer Level IV, the Fire Officer III shall meet the job performance requirements defined in Sections 7.2 through 7.7 of this standard. | Courses Listed Below |
| 7.2 Human Resource Management. This duty involves administrating job performance requirements and evaluating and improving the department, according to the following job performance requirements. | BFST4045 Personnel Management for Fire and Emergency Services |
| 7.2.1 Appraise the department’s human resource demographics, given appropriate community demographic data, so that the recruitment, selection, and placement of human resources is effective and consistent with law and current best practices. | |
| (A) Requisite Knowledge. Policies and procedures; local, state/provincial, and federal regulations; community demographics; community issues; and formal and informal community leaders. | |
| 7.2.2 Initiate the development of a program, given current member/management relations, so that a positive and participative member/management program exists. | |
| (A) Requisite Knowledge. Policies and procedures, contractual agreements, and local, state/provincial, and federal regulations. | |
| (B) Requisite Skills. The ability to communicate orally and in writing, to negotiate, to analyze current status of member relations, to relate interpersonally, to analyze the current member/management relations, and to conduct program implementation. | |
| 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. | |



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Job Performance Requirement

Associated BFST Course

(A) Requisite Knowledge. Training resources, community needs, internal and external customers, policies and procedures, contractual agreements, and local, state/provincial, and federal regulations.

BFST4045
Personnel
Management
for Fire and
Emergency
Services

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

7.2.4 Appraise a member-assistance program, given data, so that the program, when used, produces stated program outcomes.

(A) Requisite Knowledge. Policies and procedures, available assistance programs, contractual agreements, and local, state/ provincial, and federal regulations.

(B) Requisite Skills. The ability to communicate orally and in writing, to relate interpersonally to members, and to analyze needs and results.

7.2.5 Evaluate an incentive program, given data, so that a determination is made regarding achievement of the desired results.

(A) Requisite Knowledge. Policies and procedures, available incentive programs, contractual agreements, and local, state/provincial, and federal regulations.

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

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.

BFST3533
Community Risk
Reduction

7.3.1 Attend, participate in, and assume a leadership role in community functions, in given community needs, so that the image of the organization is enhanced.

(A) Requisite Knowledge. Community demographics, community and civic issues, effective customer service methods, and formal and informal community leaders.

(B) Requisite Skills. Familiarity with public relations and the ability to communicate orally.

7.4 Administration. This duty involves long-range planning and fiscal projections, according to the following job performance requirements.

BFST3720
Strategic
Planning

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.

(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.

(B) Requisite Skills. The ability to communicate orally and in writing, make public presentations, interpret fiscal analysis, comply with public policy processes, forecast resources, and analyze current department status requirements.

7.4.2 Evaluate and project training requirements, facilities, and buildings needs, given data that reflect community needs and resources, so that departmental training goals are met.

(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.



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Associated BFST Course

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| (B) Requisite Skills. The ability to communicate orally and in writing, make public presentations, interpret fiscal analysis, forecast needs, and analyze data. | BFST3720 Strategic Planning |
| 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. | |
| (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. | |
| (B) Requisite Skills. The ability to conduct a needs assessment plan, to effectively communicate in writing, and to problem solve. | |
| <u>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.</u> | <u>BFST9884 Quantitative Analysis</u> |
| <u>(A) Requisite Knowledge. Strategic planning, capital improvement planning and budgeting, and facility planning.</u> | |
| <u>(B) Requisite Skills. The ability to conduct a needs assessment plan, to effectively communicate in writing, and to problem solve.</u> | |
| 7.5 Inspection and Investigation. | Not Applicable |
| 7.5.1 Definition of Duty. No additional job performance requirements at this level. | |
| 7.6 Emergency Services Delivery. This duty involves developing plans for major disasters, according to the following job performance requirements. | BFST3533 Community Risk Reduction |
| 7.6.1 Develop a comprehensive disaster plan that integrates other agencies' resources, given risk, vulnerability, and capability data, so that the organization can mitigate the impact to the community. | |
| (A) Requisite Knowledge. Major incident policies and procedures, physical and geographic characteristics, demographics, target hazards, incident management systems, communications systems, intelligence data, contractual and mutual-aid agreements, and local, state/provincial, and federal regulations and resources. | |
| (B) Requisite Skills. The ability to analyze data, to communicate orally and in writing, to develop a disaster plan, and to coordinate interagency activity. | |
| 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. | |
| (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. | |
| (B) Requisite Skills. The ability to communicate orally and in writing and to organize a plan; familiarity with interagency planning and coordination. | |
| 7.7 Health and Safety. This duty involves administering a comprehensive risk management program, according to the following job performance requirements. | BFST3533 Community Risk Reduction |
| 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. | |



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Associated BFST Course

(A) Requisite Knowledge. Risk management concepts, retirement qualifications, occupational hazards analysis, and disability procedures, regulations, and laws.

BFST3533
Community Risk
Reduction

(B) Requisite Skills. The ability to communicate orally and in writing, to analyze data, and to use evaluative methods.