



DEPARTMENT OF FINANCIAL SERVICES

Division of State Fire Marshal
Bureau of Fire Standards and Training

Title: FFP1540 / BFST1540 / ATPC1540 Syllabus

Revision: June 25, 2019

Section I - Course Information

Course Title: Private Fire Protection Systems I

Course Number(s): FFP1540 / BFST1540 / ATPC1540

Class Days/Time: If being taught at the Florida State Fire College Campus 11655 NW Gainesville Road, Ocala, FL 34482 Bldg. C – Classrooms – Monday - Friday 8 a.m.- 5 p.m. Additional coursework outside the classroom totaling five (5) hours of work may be assigned.

Section II - Points of Contact

Training Supervisor:

Email: FloridaCollegeTraining@myfloridacfo.com

Program Manager/Instructor:

Name:

Email:

Work Phone:

Section III - Course Description

This is a study of private fire protection and detection systems such as sprinkler and standpipe systems, chemical extinguishing systems, and detection systems and devices. Each system is discussed as to its need, construction, preventative maintenance and individual uses.

Section IV - Course Materials, Grading, and Attendance

Recommended Book: *Fire Protection Systems (3rd ed.)*; A. Maurice Jones, Jr.
ISBN: 978-1284180138

Prerequisite(s): None

Contact Hours: This class has 45 contact hours.

Continuing Educations Units (CEU's): 45 hours towards Fire Safety Inspector, Instructor I/II/III, and Fire Code Administrator renewal.

Pre-Course Assignment: None

Required Materials: Paper, pens, USB portable storage device (thumb drive)

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Grading: Students must achieve a minimum cumulative score of 70% to pass this course. Course grades are determined from assignments and activities including, but not limited to homework, projects, quizzes, exams, and presentations. The instructor also has the discretion to award (**but not deduct**) points based on course participation.

Attendance: Students are required to attend all sessions of the course.

- Excused absences - Students are permitted excused absences totaling no more than 10% of class (4.5 hours maximum); the instructor shall be the sole determining authority in the determination of an excused absence and may assign supplemental work to make up for missed class time.
- Unexcused absences - The instructor shall be the sole determining authority in the determination of an unexcused absence (i.e. “no call, no show”). The instructor has no obligation to offer the student an opportunity to make up assignments, including quizzes and/or exams, but may do so at his/her discretion.

Section V - Instructor Qualifications

As per Chapter 69A-37.065, Florida Administrative Codes, *Programs of Study and Vocational Courses*, instructors must meet the following qualifications to be authorized to teach this course:

F.A.C. 69A-37.065 Instructor Qualifications. An instructor providing training under this paragraph (2)(a), must be qualified by the Bureau. 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 respective regionally accredited or nationally accredited university or college; or
- c. Instructors who hold an active Single Course Exemption Certification issued by the Bureau as outlined in subsection 69A-37.059(4), F.A.C.; or
- d. Instructors who hold an active Fire Officer I, II, III or IV Certification issued by the Bureau, and an active Instructor I, II, or III Certification issued by the Bureau; or
- e. Instructors who hold an active Firesafety Inspector I, II, or III Certification, or Fire Code Administrator Certification issued by the Bureau and an active Instructor I, II, or III Certification issued by the Bureau may teach the course “Private Fire Protection Systems I.”

69A-37.059 Training Provider and Fire Service Instructor Requirements.

The Bureau of Fire Standards and Training (Bureau) shall approve training providers and certify individuals to conduct training and education classes for fire service personnel. Upon satisfaction of the requirements listed under the respective categories, an applicant shall be awarded instructor certification appropriate to the applicant’s attainments and may teach designated subjects in the courses of training and education coming within the purview of the Bureau.

(1) Requirements for Training Providers.

(a) A public college or university, technical school or college, high school, fire service provider, private college or university, private entity, or individual must be approved as a Training Provider by the Bureau to facilitate the delivery of training to Florida’s firefighters leading to certification by the Bureau.

(b) A Training Provider must submit a completed Form DFS-K4-2167, which is incorporated by reference in Rule

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69A-37.039, F.A.C., and can be obtained where indicated in Rule 69A-37.039, F.A.C., to the Bureau for approval to offer a pre-approved course.

(c) Before offering a new course, a Training Provider must submit a completed Form DFS-K4-2301, New Course Approval Request (eff. 12/20), which is incorporated by reference and available through the Bureau Department of Insurance Continuing Education (FCDICE) portal at <https://www.myfloridacfo.com/Division/SFM/FCDICE/default.htm> or at <https://www.flrules.org/Gateway/reference.asp?No=Ref-12405>, to the Bureau for approval of the new course.

(d) A training provider must maintain all course rosters, attendance records, course evaluations, instructor evaluations, and instructor as required by Rule 1B-24.003, F.A.C., and enter course grades within 20 days of the last day of class into the Bureau's FCDICE portal.

(2) Requirements for Fire Service Instructors.

(a) A Fire Service Instructor must be affiliated with at least one Training Provider and be certified by the Bureau to conduct training activities for Florida's fire service professionals which lead to any certification by the Bureau or continuing education.

(b) Prior to a Fire Service Instructor teaching an approved course for a Training Provider, a certified Fire Service Instructor or Training Provider must submit a completed Form DFS-K4-2168, Instructor Approval Request (eff. 04/16), which is incorporated by reference in Rule 69A-37.039, F.A.C., and can be obtained where indicated in Rule 69A-37.039, F.A.C., to the Bureau for the approval of the certified Fire Service Instructor to teach the approved course.

Section VI – Job Performance Requirements Applicable Fire and Life Safety Initiatives

Given information from discussion and reading materials, the student will satisfy the Job Performance Requirements (JPR) of the applicable National Fire Protection Association (NFPA) standards, any applicable skill sheets, and the applicable Fire and Life Safety Initiatives of the National Fallen Firefighters Foundation *Everyone Goes Home* program.

NFPA 1021, Standard for Fire Officer Professional Qualifications, 2020 Edition

4.5 * Inspection and Investigation.

This duty involves conducting inspections to identify hazards and address violations, conducting pre-incident plans, performing a fire investigation to determine area of origin and preliminary cause, securing the incident scene, and preserving evidence, according to the following job performance requirements.

4.5.1

Describe the procedures of the AHJ for conducting fire inspections, given any of the following occupancies, so that all hazards, including hazardous materials, are identified, approved forms are completed, and approved action is initiated:

1. Assembly
2. Educational
3. Health care
4. Detention and correctional
5. Residential
6. Mercantile

7. Business
8. Industrial
9. Storage
10. Unusual structures
11. Mixed occupancies

(A) Requisite Knowledge.

Inspection procedures; fire detection, alarm, and protection systems; identification of fire and life safety hazards; and marking and identification systems for hazardous materials.

(B) Requisite Skills.

The ability to communicate and to apply the appropriate codes and standards.

4.5.2

Identify construction, alarm, detection, and suppression features that contribute to or prevent the spread of fire, heat, and smoke throughout the building or from one building to another, given an occupancy, and the policies and forms of the AHJ so that a pre-incident plan for any of the following occupancies is developed:

1. Assembly
2. Educational
3. Institutional
4. Residential
5. Business
6. Industrial
7. Manufacturing
8. Storage
9. Mercantile
10. Special properties
11. Mixed occupancies

NFPA 1031, Standard for Professional Qualifications for Fire Inspector and Plans Examiner, 2014 Edition

3.3.20.1 Fire Protection Systems. Systems, devices, and equipment used to detect a fire and its by-products, actuate an alarm, or suppress or control a fire and its by-products, or any combination thereof.

4.2* Administration. This duty involves the preparation of correspondence and inspection reports, handling of complaints, and maintenance of records, as well as participation in legal proceedings and maintenance of an open dialogue with the plan examiner and emergency response personnel, according to the following job performance requirements.

4.2.1 Prepare inspection reports, given agency policy and procedures, and observations from an assigned field inspection, so that the report is clear and concise and reflects the findings of the inspection in accordance with the applicable codes and standards and the policies of the jurisdiction.

4.2.5* Identify the applicable code or standard, given a fire protection, fire prevention, or life safety issue, so that the applicable document, edition, and section are referenced.

4.3 Field Inspection. This duty involves fire safety inspections of new and existing structures and properties for construction, occupancy, fire protection, and exposures, according to the following job performance requirements.

4.3.1 Identify the occupancy classification of a single-use occupancy, given a description of the occupancy and its use, so that the classification is made according to the applicable codes and standards.

4.3.5* Determine the operational readiness of existing fixed fire suppression systems, given test documentation and field observations, so that the systems are in an operational state, maintenance is documented, and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.

4.3.6* Determine the operational readiness of existing fire detection and alarm systems, given test documentation and field observations, so that the systems are in an operational state, maintenance is documented, and deficiencies are identified, documented, and reported in accordance with the policies of the jurisdiction.

4.3.7* Determine the operational readiness of existing portable fire extinguishers, given field observations and test documentation, so that the equipment is in an operational state, maintenance is documented, and deficiencies are identified, documented, and reported in accordance with the policies of the jurisdiction.

4.3.9 Compare an approved plan to an existing fire protection system, given approved plans and field observations, so that any modifications to the system are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.

4.3.15* Determine code compliance, given the codes, standards, and policies of the jurisdiction and a fire protection issue, so that the applicable codes, standards, and policies are identified and compliance is determined.

4.3.16 Verify fire flows for a site, given fire flow test results and water supply data, so that required fire flows are in accordance with applicable codes and standards and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.

5.3.4* Evaluate fire protection systems and equipment provided for life safety and property protection, given field observations of the facility and documentation, the hazards protected, and the system specifications, so that the fire protection systems provided are approved for the occupancy or hazard being protected.

Applicable Fire and Life Safety Initiatives

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3. Focus greater attention on the integration of risk management with incident management at all levels, including strategic, tactical and planning responsibilities.
5. Develop and implement national standards for training, qualifications, and certification (including regular recertification) that are equally applicable to all firefighters based on the duties they are expected to perform.
15. Advocacy must be strengthened for the enforcement of codes and the installation of home fire sprinklers.

Section VII – Plan of Instruction

The following is the plan of instruction used during course offerings held at the Florida State Fire College. It also serves as the suggested instructional block format for other approved training providers who use the recommended text book. All class offerings **must** satisfy the JPRs listed in *Section VI – Job Performance Requirements* regardless of textbook used.

| Day/Date | Chapters | Activities |
|----------|---|--|
| Day 1 | Class Introductions and Orientation Chapter 1 – Basics of Fire Behavior Chapter 2 – Fire Protection Systems and the Model Code Process Chapter 3 – Fire Alarm Systems Codes and Components Chapter 4 – Types of Fire Alarm and Detection Systems Group/Individual Project Discussion and Assignment | <ul style="list-style-type: none"> • Introductions • Group project discussion |
| Day 2 | Quiz – Chapters 1-4 Chapter 5 – Water Supplies for Fire Protection Systems Chapter 6 – Standpipe and Hose Systems Chapter 7 – Automatic Fire Sprinkler Systems Chapter 8 – Specialized Water-Based Fire Protection Systems | <ul style="list-style-type: none"> • Quiz 1 • Videos |
| Day 3 | Quiz – Chapters 5-8 Chapter 9 – Fixed Wet and Dry Chemical Extinguishing Systems Chapter 10 – Gaseous Agent Extinguishing Systems Chapter 11 – Portable Fire Extinguishers Walk through of on-campus system | <ul style="list-style-type: none"> • Quiz 2 • Videos • Walk through |
| Day 4 | Quiz – Chapters 9-11 Chapter 12 – Smoke Control and Management Systems Chapter 13 – Property Security, Emergency Response, and Fire Protection Systems Review of Laws and Rules governing inspectors <ul style="list-style-type: none"> • Chapter 633 Florida Statutes • Florida Administrative Code 69A • Florida Fire Prevention Codes | <ul style="list-style-type: none"> • Quiz 3 • Videos • Legislative review |

| | | |
|-------|--|---|
| Day 5 | Quiz – Chapters 12-13 Review of materials covered Final Exam Final Project Presentations Course Completion | <ul style="list-style-type: none"> • Quiz 4 • Final exam • Project presentations |
|-------|--|---|

Section VIII – Final Presentation and Grading Rubric

Description of Assignment:

The final project for this class involves a group presentation in PowerPoint format. All members are expected to contribute equally. The presentation should take no longer than 5-10 minutes and groups must submit a written summary of their work to accompany their presentation.

As a group you will visit a business in the area and request permission to review their fire alarm and suppression system. Examples of businesses include but are not limited to strip malls, restaurants, medical facilities, schools, and other businesses. Apply the information learned in class and do an inspection/preplan of the system in place. **DO NOT SUBMIT A DEPARTMENT ORIGINATED DRAWING. ALL WORK MUST BE ORIGINAL IN ORDER TO RECEIVE CREDIT.**

Format and Grading of Assignment:

Students will conduct and create a drawing of a pre-fire plan of a building fire protection system within their response district. The drawing may be completed utilizing any drawing program (i.e. Microsoft Publisher, Visio, etc.) available. Students may create the drawing by hand.

The final project is worth 100 points towards the final grade. Scoring will be assigned according to the grading rubric. To receive full credit, the following elements need to be present:

- Business name and address
- Type of alarm system
- Location of the FACP
- Location and type(s) of alarm devices
- Type of suppression system(s)
- Standpipes and FDC

- Water supply
- Location of portable fire extinguishers
- Fire department access
- Communication system
- Any special hazards
- Legend of symbols used

| | Rating | | | | | Score |
|---|--|--|---|---|---|-------|
| | 20 | 15 | 10 | 5 | 0 | |
| Building Layout | Building layout is clearly defined and easy to understand; drawing provides clear indication of street and building access | Building layout is clearly defined and moderately easy to understand; drawing provides indication of street and building access | Building layout is moderately defined but easy to understand; drawing provides indication of street or building access but not both | Building layout is moderately defined and difficult to understand; drawing provides indication of street or building access but not both | Building layout is poorly defined and difficult to understand; drawing does not provide indication of street or building access | |
| Symbols Used | Legend is present and includes all symbols in drawing; symbols are unique respective to one another, clearly identified, and reflect locations on drawing; drawing specifically identifies location of water shut offs for utilities | Legend is present and includes most symbols in drawing; symbols are unique respective to one another, fairly identified, and reflect locations on drawing; drawing specifically identifies location of water shut offs for utilities | Legend is present and includes most symbols in drawing; symbols are not unique respective to one another, fairly identified, or reflect locations on drawing; drawing generally identifies location of water shut offs for utilities | Legend is present and includes less than 50% of symbols in drawing; symbols are not unique respective to one another, poorly identified, or do not reflect locations on drawing; drawing fails to identify location of water shut offs for utilities | Legend absent from drawing; symbols absent or unclear what they are indicating; drawing fails to identify location of water shut offs for utilities | |
| Water Supply and Fire Protection Systems | Drawing provides a clear hydrant locations and distance from structure; drawing provides clear indication of sprinkler system status; drawing indicates presence of FACP AND FDC locations (should indicate if not present in building) | Drawing provides hydrant locations and distance from structure; drawing provides clear indication of sprinkler system status; drawing indicates presence of FACP OR FDC locations or fails to indicate absence of either system in building | Drawing provides hydrant locations and distance from structure; drawing provides no indication of sprinkler system status; drawing indicates presence of FACP OR FDC locations or fails to indicate absence of either system in building | Drawing provides hydrant locations without distance from structure; drawing provides no indication of sprinkler system status; drawing does not indicate presence of FACP OR FDC locations or fails to indicate absence of either system in building | Drawing does not provide hydrant locations and distance from structure; drawing provides no indication of sprinkler system status; drawing does not indicate presence of FACP OR FDC locations or fails to indicate absence of either system in building | |
| General Formatting | Business name and address are present in the upper left-hand corner; directional indicator is present at the top of the page; drawing provides a clear idea of hazards, access, and informational messages | Business name and address are present but not in the upper left-hand corner; directional indicator is present but not at the top of the page; drawing provides an idea of hazards, access, and informational messages | Business name and address OR directional indicator is not included in drawing; drawing provides a moderate idea of hazards, access, and informational messages | Business name and address OR directional indicator is not included in drawing; drawing provides a poor idea of hazards, access, and informational messages | Business name and address AND directional indicator is not included in drawing; drawing provides no idea of hazards, access, and informational messages | |
| Fire Protection System Factors | Student provides a minimum of seven (7) fire protection system factors | Student provides 5-6 fire protection system factors | Student provides four (4) fire protection system factors | Student provides three (3) fire protection system factors | Student fails to provide a minimum of two (2) fire protection system factors | |
| TOTAL POINTS | | | | | | |