

## **National Fire Academy Criteria for Contract Instructor Selection**

**Course:**       **Commercial Fire Sprinkler System Plans Review (R0263)**

**Curriculum: Fire Prevention: Technical**

This advanced-level, rigorous, 5-day course will enable students to perform a shop drawing review to evaluate the suitability of the fire sprinkler plans and hydraulic calculations in accordance with nationally recognized standards for design and installation. Course content covers fire protection standards, shop drawing reading, water supplies, building envelope features, fire protection hydraulic mathematics and wet-type sprinkler system components. There is significant pre-course work, graded activities and a final project.

### **Criteria for Contract Instructor Selection**

All new contract instructors or those existing instructors wishing to expand their teaching portfolio must be instructionally dedicated to the Fire Prevention: Technical curriculum and cannot cross boundaries teaching in other National Fire Academy (NFA) curricula. Interest with other curricula will signal a voluntary withdrawal of teaching privileges from the Fire Prevention: Technical courses.

This curriculum teaches finely detailed and meticulously specific content concerning construction and maintenance codes, standards, guides, recommended practices, testing criteria, and manufacturers' specifications for the built environment. Instructors must be national subject matter experts, as compared to a local, fundamentally strong code enforcer, since the country has a geographically diverse array of students and code requirements.

A major characteristic necessary to serve in this instructional capacity is the willingness to coach the student cadre to success. The philosophy of the instructor is to mentor less knowledgeable individuals by transferring highly detailed information, using verbal skills coupled with visual graphics, to propel them to excellence. This curriculum does not support self-absorbed instructors appeasing their own interests but is squarely focused on the student-centered learning outcome.

All new contract instructors shall be evaluated in 3 consecutive course deliveries in accordance with the NFA Contract Instructor Evaluation program. Existing contract instructors are subject to evaluation in accordance with this program.

#### **1. Academic Requirement**

- a. The candidate should possess a master's degree in fire protection engineering or another closely related field from an accredited institution. Candidates are encouraged to have successfully completed this course in the last 3 years and/or served as an adjunct instructor (in training) in the course.

- b. Consideration will also be given to those candidates with a bachelor’s degree from an accredited institution that confers a degree in fire protection engineering, fire protection technology, fire administration, fire science or similar program. All candidates should have at least 1 semester of each of the following courses: algebra, fire protection hydraulics and physics. Candidates are encouraged to have successfully completed this course in the last 3 years and/or served as an adjunct instructor (in training) in the course.

**2. Documented Technical Knowledge and Relevant Experience**

- a. The candidate must have extensive experience as a sprinkler system plans examiner for a local, state or national entity that is legally responsible for the enforcement of building and fire codes. Provide specific, quantifiable and qualifiable (simplistic to complex) examples of work performed and the codes and standards (editions) utilized. Experience as a sprinkler design professional working through the process of designing, coordinating with other trade disciplines and submitting designs for permits is an acceptable alternative. List the examples in a tabular format such as:

<b>Project name</b>	<b>Value, square footage or description</b>	<b>Codes and editions</b>	<b>Year</b>
Acme Hotel	7-story high-rise hotel including swimming pool, restaurant and integrated parking garage, \$50 million, 14 hydraulic calculations, 1,527 sprinklers	2018 IBC, 2018 IFC, 2018 LSC, 2016 NFPA 13	2020
ACME Hardware and Warehouse	500,000-square-foot mercantile store and warehouse (ESFR), 525 sprinklers, 7 hydraulic calculations	2021 IBC, 2019 NFPA 13	Current

- b. The candidate should be experienced, proficient and knowledgeable of current issues in the field of expertise for the content of this course. Active participation with relevant national code and/or standard committees, such as National Fire Protection Association (NFPA) and International Code Council (ICC) committees or state committees for adoption of building and fire codes, is highly recommended. List the examples in a tabular format such as:

<b>Committees</b>	<b>Year(s)</b>
NFPA 1, Building Systems and Special Occupancies subcommittee (alternate)	2016-present
Maryland State Fire Prevention Committee — Code Update	2018

- c. The candidate should have the necessary education and experience to be capable of presenting all units of the course. It is recognized that exceptions may occur where courses are of such a technical nature that no one person may be technically competent to instruct all units. Verifiable examples of professional licensure such as Professional Engineer can be provided. Professional certificates such as National Institute for Certification in Engineering Technologies Water-Based Systems Layout Levels III or IV, NFPA Certified Water-Based Systems Professional, or ICC Commercial Fire Sprinkler Plans Examiner can be submitted.

<b>Licenses</b>	<b>Regulatory body</b>	<b>Dates</b>
Professional Engineer	Maryland	1994-current
<b>Certifications</b>	<b>Organization</b>	<b>Dates</b>
NICET Water-Based Level IV	NICET	2000-current
Certified Fire Protection Specialist	NFPA	2001-current

- d. Experienced, proficient and knowledgeable of current issues in the field of expertise with reviewing/designing sprinkler shop drawings and verifying/performing hydraulic calculations. Provide a narrative to support your knowledge and experience.
- e. Current knowledge of hydraulic calculation programs incorporating Hazen Williams or Darcy-Weibach formulas. Provide a narrative to support your knowledge and experience
- f. Current knowledge of NFPA 13, *Standard for the Installation of Sprinkler Systems*, for automatic sprinkler systems and NFPA 291, *Recommended Practice for Water Flow Testing and Marking of Hydrants*, for water supply requirements supplying fire suppression systems. Provide a narrative to support your knowledge and experience.
- g. Current knowledge of the behavior of fire and its effects on building materials and sprinkler systems; fire, heat, and smoke spread and travel in a structure; building construction classifications; and principles of protecting fire hazards listed by NFPA 13 classifications. Provide a narrative to support your knowledge and experience.

**3. Documented Educational Instruction and Experience**

Accepted formal instructional training, such as:

- a. State fire training certificate and courses taught with frequency/history. List the information in a tabular format such as:

<b>Certificates</b>	<b>Year completed</b>
Fire Instructor I (PA)	2015
Fire Instructor II (MD)	2016
IFSAC Fire Service Instructor I	2015
Pro Board Fire Instructor II	2017

- b. College instructor/professor’s credential with courses designed/instructed. List the information in a tabular format such as:

<b>Institution</b>	<b>Credential</b>	<b>Courses</b>
University of Maryland	Lecturer	Fire Protection Hydraulics
Oklahoma State University	Adjunct Faculty	Building Construction Components

- c. College education instruction courses with a transcript supplied. List the information in a tabular format such as:

<b>Institution</b>	<b>Course number</b>	<b>Course name</b>
University of Maryland	TLPL 101	Inquiry Approach to Teaching STEM
University of Maryland Global Campus	EDTP 600	Foundations of Teaching for Learning

- d. A minimum of 48 hours of detailed, documented and successful fire/emergency services instruction listing each course and dates of delivery. List the information in a tabular format such as:

<b>Courses</b>	<b>Frequency/history</b>
Firefighter I (120 hours)	Once/January 2015-May 2015
Fire Inspector 1 (40 hours)	October 2016, April 2017, August 2017, January 2018

- e. Speaking engagements and/or presentations at national/state conferences for the fire service or other relevant professional organizations with a listing of topics and dates.

Conference	Topic	Year
NFPA Annual Conference	NFPA 25 Proposed Changes	2020
ICC Expo and Code Hearings	Marijuana Code Concerns	2019

**4. Continuing Practice or Education**

Ability to maintain currency in the field and the specific course by:

- a. Teaching a similar course at a training academy, college or university.
- b. Taking a similar course within the last 5 years.
- c. Developing a similar course within the last 5 years.
- d. Teaching the course at the NFA or in the field within the last 2 years.
- e. Writing and researching a paper or article related to the course topic for at least 1 of the fire service or related disciplines’ trade journals within the last 2 years.
- f. Attending and/or speaking at a conference related to the field at the local, state, tribal or national level within the last 3 years.
- g. Active participation with local/state/national building/fire code(s) or standard(s) committee(s).

Failure to provide approved documentation of ongoing training or instruction may result in revocation of the contract instructor status.

**5. How To Submit a Portfolio**

Follow the instructions located on the website:

[https://www.usfa.fema.gov/training/nfa/instructors\\_officials/criteria.html](https://www.usfa.fema.gov/training/nfa/instructors_officials/criteria.html).

A portfolio addressing all of the previous items must be submitted to: [fema-nfainstructorapp@fema.dhs.gov](mailto:fema-nfainstructorapp@fema.dhs.gov).