

NFSA Certificate Program for Fire Sprinkler Technicians Detailed Outline

The program is a two-year commitment to learning divided into six phases that raise the level of knowledge and productivity of the fire sprinkler design technician through a guided process. New cycles of the program start in the spring and fall of each year. For more information on specific starting dates, see the description of Phase 1 below and check out the dates and locations of upcoming seminars on the NFSA website www.nfsa.org.

Each participant will need to identify a mentor in his or her company to assist with the learning experience. The mentor will help by being a resource to the participant and will provide appropriate job assignments in keeping with the subjects learned during the program. The mentor will also be apprised of the participant's progress to make sure that the participant is meeting deadlines and not falling behind.

Phase 1 – The participant takes the NFSA Two-week Layout Technician Training Seminar. The NFSA usually plans a minimum of three of these classes each year. The following subjects will be covered during this 10-day course:

<p>Day 1 History of Sprinklers, Physical Science, Principles of Combustion, Rules Governing Installation, The Layout Process, Basic Drafting, Fire Protection Symbols, Types of Systems & Common Components, Basic Math & Metric System</p>	<p>Day 6 Standpipe Systems, Wet Pipe System Layout Example and Calculation</p>
<p>Day 2 Water Supply Requirements and Testing, Underground Piping, Backflow Protection, Types of Construction and Structures, System Configurations, Hazard Classifications, Sprinkler Spacing & Location</p>	<p>Day 7 Tanks, Dry Pipe System Layout and Calculation</p>
<p>Day 3 Sprinkler Obstruction Rules, Extended Coverage Sprinklers, Aboveground Piping and Fittings, Hangers Seismic Considerations, Contracts & Specifications, Choosing the Materials for the Job, Timing & Coordination of Trades, Changes to the work</p>	<p>Day 8 Residential Sprinkler Systems, One and Two Family Dwelling Rules of NFPA 13D, Multi-Family Dwelling Rules of NFPA 13R, Inspection Testing and Maintenance of Sprinkler Systems</p>
<p>Day 4 Hydraulic Calculation Theory and Examples, System Connections, Alarms and Supervision</p>	<p>Day 9 Commodity Classifications for Storage, Types of Storage, Sprinkler Protection of General Storage, Introduction to Rack Storage</p>
<p>Day 5 Fire Pumps, Review of First Week</p>	<p>Day 10 Sprinkler Protection of Rack Storage of Class I-IV, Commodities and Group A Plastics.</p>

Phase 2 – A 30-week series of self study recorded modules (45 to 60 minutes long) with homework and exams as well as live interaction with an instructor and their fellow students in an Internet chat room for two hours every other week. The purpose of these modules is to review information from Phase 1, add slightly more difficult topics, and provide additional examples of how to apply the information. The modules include a PowerPoint presentation, a recorded audio file that the participant listens to while watching the PowerPoint presentation, and a homework assignment. After listening to the presentation, the participant does the homework assignment and turns it in. The NFSA then provides feedback and assistance in applying the information from the module. A new module starts every two weeks. The subject lessons (modules) are as follows:

Module Number	Subject
2-1	Specifications (include a sample specification and give the student an assignment to find spec's in their office and see how they compare)
2-2	Hazard and Commodity Classification Review (including discussion of multiple situations in the same building or compartment)
2-3	Spacing and Location of Sprinklers (include non-uniform ceilings and combinations of ceiling situations)
2-4	Hydraulic Calculations Review
2-5	Hydraulic Calculation Decisions (a practical discussion of decision making and how each affects the others)
2-6	Hydraulic Calculation with Computers, Inputs and Outputs (custom for each program)
2-7	Large Drop and Specific Application Sprinklers
2-8	ESFR Sprinklers
2-9	Seismic
2-10	Field Check and Coordination
2-11	Acceptance Tests
2-12	Exam

Phase 3 – On the Job Training with mentor for 6 months. During this phase, the participant puts into practice what they have learned during the previous two phases.

Phase 4 – Self study modules similar in format to Phase 2 with same kind of student/teacher interaction in the following subject areas:

Module Number	Subject
4-1	Survey Techniques
4-2	Selection of Materials for the Job (include a discussion of corrosion issues)
4-3	Fire Pump Appurtenances and Controllers
4-4	Standpipe and Combined System Considerations
4-5	Concealed Spaces and Shafts
4-6	Seismic
4-7	High Piled Storage Review (include draft curtains and smoke/heat vents)
4-8	Rack Storage Review
4-9	Rack Storage (include face sprinklers, supporting piping)and special storage sprinklers
4-10	NFPA 13D and NFPA 13R (Multi-purpose systems, heat sources, areas outside dwelling unit
4-11	Residential Sprinklers in NFPA 13 (density, spacing, obstructions)
4-12	Exam

Phase 5 – On the Job Training with Mentor for 6 months similar to Phase 3.

Phase 6 – A three-day seminar in a classroom. At the end of the class will be a final exam. The following is a description of the class:

Module Number	Time Allotted (minutes)	Subject
6-1	15	Introduction to Seminar
6-2	45	Contracts
6-3	45	Project Scheduling and Coordination
6-4	60	Product Approval Standards for Sprinklers
6-5	60	Meters and Backflow
6-6	75	Advanced Hydraulic Design Area
6-7	75	Velocity Pressure Calculations
6-8	-	First Night Homework
6-9	60	Homework #1 Review
6-10	75	Hardy Cross Loop Analysis
6-11	45	Antifreeze Systems
6-12	60	Freezer/Cooler Protection
6-13	60	Internal and External Corrosion
6-14	60	Water Spray Systems
6-15	-	Second Night Homework
6-16	60	Homework #2 Review
6-17	60	Computer Fire Models
6-18	120	Exam
6-19	60	Grading/Graduation

2009 CPFST Registration Form
NFSA Certificate Program for Fire Sprinkler Technicians

NFSA Member: Yes No If yes, Member Number: _____

Student's Name: _____

Mentor: _____
(supervisor or knowledgeable person in the company to partner in program)

Company: _____

Address: _____

City, State, Zip: _____ Telephone: _____

Student's E-mail: _____ Mentor's E-mail: _____

- Select one location for Phase 1:
- Denver, CO (January 26 – February 6)
 - Orlando, FL (March 2-13)
 - Cincinnati, OH (March 23 – April 3)
 - Omaha, NE (August 10-21)
 - Baltimore, MD (September 14-25)
 - Phoenix, AZ (October 12-23)

PLEASE NOTE: The cost of this course does not include travel or sleeping arrangements.

Payment Method

Please pick one:

- Enclosed is my check for the full amount (\$7,500 for members and \$11,000 for non-members) payable to the National Fire Sprinkler Association.
- Enclosed is my check for the first installment (\$3,750 for members and \$5,500 for non-members) payable to the National Fire Sprinkler Association. I understand that I will owe another payment of \$3,750 (\$5,500 for non-members) in 2010.
- Please charge my credit card for the full amount (\$7,500 for members and \$11,000 for non-members).
- Please charge my credit card for the first installment (\$3,750 for members and \$5,500 for non-members) payable to the National Fire Sprinkler Association. I understand that I will owe another payment of \$3,750 (\$5,500 for non-members) in 2010.

Account Number: _____ Exp. Date: _____

Signature: _____ Security Code: _____

Billing Address for Account: _____

For questions, call the NFSA at (845) 878-4200 Ext. 149.

Return form to NFSA, Certificate Program for Fire Sprinkler Technicians, 40 Jon Barrett Road, Patterson, NY 12563 or Fax to (845) 878-4215.