



**BII WORLD**  
Engage • Enlighten • Empower

**7<sup>th</sup> Virtual  
Edition**

# **CERTIFIED FIRE PROTECTION SPECIALIST**

Studies have shown that individuals that attain International Certification are more likely to achieve higher salaries and be promoted over those individuals that are not



Online Virtual Classroom Training



20 Hours Live Interactive Sessions

24 - 28 June 2024

11:00 - 15:30 Time in Papua New Guinea/Australia  
09:00 - 13:30 Time in Philippines/Malaysia

[www.biiworld.com](http://www.biiworld.com)



The purpose of the Certified Fire Protection Specialist credential is to recognize, through certification, qualified individuals who are dedicated to curtailing fire loss, both physical and financial and who have acquired a level of professionalism through applied work experiences and related education opportunities and through successful completion of a certification examination.

The goal of the CFPS program is to promote the discipline of fire protection and prevention. A specific degree is not mandatory for obtaining your CFPS designation. The credential is a balance of education and experience and provides an opportunity for the fire protection specialist to achieve professional recognition. The National Fire Protection Association maintains certification and recertification criteria as related to fire protection specialists.

## **Certified Fire Protection Specialist (CFPS) awarded by The National Fire Protection Association (NFPA)**

The Certified Fire Protection Specialist (CFPS) credential was created in 1971 for the purpose of documenting competency and offering professional recognition for individuals involved in curtailing fire loss, both physical and financial.

Since then, CFPS has been awarded to more than 4,000 people who have demonstrated a level of professionalism through applied work experience, related education opportunities, and successful completion of a certification examination.

CFPS<sup>®</sup> certification holders attain the knowledge and proficiency required to ensure the highest level of fire protection for organization and facility. It is an internationally recognized credential commitment to fire protection and distinguishes you as someone who is willing to invest the time and effort to enhance your career.

NFPA is a global self-funded nonprofit organization in USA, established in 1896, devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. NFPA delivers information and knowledge through more than 300 consensus codes and standards, research, training, education, outreach and advocacy; and by partnering with others. NFPA membership totals more than 50,000 individuals around the world.



# NFPA Fire Protection Handbook, 20th Edition



In a field as wide ranging and dynamic as fire protection, staying current with the latest research, technology, and safety practices is as challenging as it is essential. The fully updated, new 20th edition FPH<sup>®</sup> provides state-of-the-art in-depth coverage of every aspect of fire protection so you can eliminate knowledge gaps, avoid errors, and maintain your competitive edge. It consists of

- Two volumes with 3,500 pages cover the total spectrum of fire protection issues.
- 211 chapters, including 25 that are brand new to this edition, reflect the latest knowledge and tactics.
- 254 leading authorities provide answers and solutions on demand.
- Thousands of visuals -- including 500 added photos, tables, charts, illustrations, and diagrams -- aid comprehension.

## Added chapters improve your ability to protect lives and property.

### First-time coverage includes:

- Premises Security explores how to incorporate architectural, technical, and operational security elements into a comprehensive and effective security plan.
- Protecting Against Extreme Events outlines how to increase a building's resilience to such events and better protect its occupants.
- Flammability Hazard of Materials discusses test methods for measuring and characterizing ignitability, heat release rate, flame spread propensity, smoke yield and extinguishability components of flammability hazard for solid combustibles.
- Strategies for Occupant Evacuation During Emergencies examines considerations that include building characteristics, occupant characteristics, criticality of building operations; and, outside influences such as weather or the threat of violence.

## New features make it easy to navigate massive amounts of information:

- Smaller, more focused sections streamline research.
- Easy-to-use tabs (included) provide instant access to specific topics.
- An individual table of contents for each chapter maximizes searching efficiency.
- A new two-color format makes captions, subheads, and bulleted information stand out clearly.

## 20th / 21st Edition NFPA Handbook (Hardcopy)

It has to be purchased from NFPA to write the CFPS Exam.

The following links for the purchase process:

<https://catalog.nfpa.org/Fire-Protection-Handbook-20th-Edition-P13860.aspx>

<https://catalog.nfpa.org/Fire-Protection-Handbook-21st-Edition-P22371.aspx>





**Instructor:**

# John Redden

**CFPS, AIFireE**

**Global Fire Protection Specialist with 40+ years of experience and demonstrated history of working in the public safety industry.**

## International Certifications

1. Certified Fire Protection Specialist (CFPS) from National Fire Protection Association (NFPA)
2. Associate of the Institution of Fire Engineers (AIFireE) from Institute of Fire Engineering which is focused on Fire Science.
3. Certified Level 1 & 2 Instructor Nova Scotia Fire Fighters School
4. Certified Technician for the repair of Survive Air and MSA breathing Apparatus

## Profile Highlights

1. Highly skilled in Fire Management, Emergency Management, Confined Space Rescue, Vehicle Extrication and Emergency Medical Services (EMS).
2. He was part of a program development of the specialized program which included Fire Inspection for Institutions, Breathing Apparatus for Trainers and Maintainers, Fire Investigation and Fire Prevention.
3. He was a Training Officer for Federal Government of Canada Office of the Fire Commissioners and later took the role of Investigator in the Fire Commissioner's Office.
4. After becoming Certified Level 1 & 2 Instructor, he became Field Extension coordinator for the Nova Scotia Fire Fighters School.
5. He has completed Fire Service Officer's training and is an instructor for Fire Ground Command.
6. He has also completed train the trainer program in Marine Fire Protection and Hazardous Material First Responder.





# Course Outline

## Day 1

Welcome and Administrative Duties

About the NFPA Handbook

About the Test

Important Keywords and Associations

Key Words by Section

### Section 2: Basics of Fire Science

- 1.Chemistry and Physics of Fire
- 2.Fire Growth and Spread
- 3.NFPA six stages of fire protection Philosophy

### Section 1: Safety in the as build Environment

- 1.NFPA 25 Building System Matrices & Scheduling
- 2.NFPA 25 Forms and Checklists

### Section 4: Human Factors in Emergencies

- 1.Egress Codes
- 2.Egress Design and Computations

## Day 2

Review of Day One

### Section 15: Water Supplies for fixed Fire Protection

- 1.Fire Underwriters Survey
- 2.NFPA 22 Design and Installation
- 3.NFPA 22 Inspection and Testing
- 4.Water Distribution Systems
- 5.Global Information System (GIS) in Water Supply

### Section 16: Water Based Fire Suppression Systems

- 1.Automatic Sprinkler Systems
- 2.Private Water Based Protection Systems
- 3.Public Water Based Protection Systems

Activity: Virtual Field Inspection

Test Taking Strategies



# Day 3

## Review of Day 2

### Section 17: Structural Fire Protection and Portable Fire Protection

1. Extinguishing Agents
2. Portable Extinguishers

### Section 14: Detection and Alarm

1. Fire Alarm Systems
  - a. Local / Central / Remote
2. Detection Types
3. Review Process flow detection/Alarm/Suppression

### Section 9: Processes and Facilities

1. High Hazard Facilities
2. High Value Facilities

### Section 11: Fire Prevention Practices

1. House Keeping
2. Waste Handling

# Day 4

## Review of Day 3

### Section 12: Non-Emergency Fire Department Function

1. Public Fire and Life Safety Education
2. Prevention and Inspection
3. Disaster Planning

### Section 10: Building Services

1. Emergency and Standby Power
2. Heating, Ventilation and Air Conditioning HVAC

### Section 5: Fire and Life Safety Education

1. Principles and Techniques
2. Adult education vs juvenile

### Section 3: Information and Analysis for Fire Protection

1. Data Collection
2. Data Analysis



# Day 5

## Review Day 4

### Section 13: Emergency Response

### Section 21: Transportation Fire Safety

### Section 6: Characteristics of Materials and Products

1. Chemical Properties
2. Chemical Hazards

### Section 7: Storage and handling of Materials

1. Segregation
2. Containers
3. Labeling

### Section 20: Protecting Occupancies

## Who Should Attend?

### Industries

- Oil and Gas
- Chemicals
- Mining
- Manufacturing
- Automobiles
- Aviation
- Food and Beverages
- Healthcare
- Hospitality
- Construction
- IT and Finance
- Government

### HSSE Department

- Fire Officers
- Fire Marshals
- Fire Inspectors
- Fire Fighters
- Fire Protection Officers
- Fire Safety Officer
- Fire Prevention Engineers
- Fire Prevention Coordinators
- Fire Code Enforcers
- Fire and Safety Manager
- Safety Managers
- Fire & Gas Systems Engineers
- Fire & Gas Systems Supervisors
- Risk managers
- Loss Control Specialists
- Emergency Response Team
- HSSE Manager
- HSE Manager
- Law Enforcement Officials
- Fire Safety Consultants
- Facility managers



# Training Methodology

1. Pre-Course Preparation:
  - a. Pre-course questionnaire needs to be filled and submitted by the attendees before the online training. This will help the trainer to format the training as per attendees' understanding level and specific requirements.
  - b. Pre-course materials and assignments will be provided by the trainer before the online training. Attendees need to study the material and submit the assignments before entering the online classroom.
2. Real Time Virtual Training: This course in principle does not differ to the direct presentation and assessment (face to face training). In 5-day classroom immersion, all the material in the original syllabus will be presented online as well as the tests.
3. Live Interactive Sessions: Polling, Q&A round will be provided to interact with the trainer online. Trainer will also be available post course to interact with the attendees.
4. Videos & Exercises: Videos will be shown as a part of case studies. There will also be a few class exercises during the training.
5. Comprehensive Learning Kit: Trainer will provide course materials during/after the training which will be helpful for the attendees as the future reference in their continuous learning journey.
6. Break Down Day Timing:

Session 1	60 min
Break 1	10 min
Session 2	60 min
Break 2	10 min
Session 3	60 min
Break 3	10 min
Session 4	60 min

## Continuous Learning Validation Certificate:

- This certificate will validate and certify the attendees' credibility shown in continuous learning.
- The attendees will receive soft copy of this certificate.
- It is mandatory to attend all the 5 days training to earn this certificate.





# CFPS Exam

**Duration: 3 Hours**

**No. of Questions: 100**

**Type of Questions: Multiple Choice**

**Type of Exam: Open Book Computer Based Test**

## Important Notice

- Only hard copy of the 'Fire Protection Handbook, 20th Edition' purchased from NFPA will be allowed to take the CFPS exam.
- Without this book candidates will not be allowed to take the CFPS exam.

## CFPS Examination Content Area Weightage

### Domain 1: Safety in the Built Environment (2%)

- Identify challenges to safety in the built environment
- Apply fundamentals of safe building design
- Be familiar with the local and regional codes and standards for the built environment

### Domain 2: Basics of Fire and Fire Science (10%)

- Identify the chemistry and physics of fire
- Identify dynamics of fire growth

### Domain 3: Information and Analysis for Fire Protection (3%)

- Conduct fire loss investigation
- Collect and use fire incident data and statistics
- Conduct fire analysis
- Apply data and analysis

### Domain 4: Human Behavior in Fire Emergencies (5%)

- Identify principles of human behavior and fire
- Identify concepts of egress design
- Use calculation methods for egress prediction

### Domain 5: Fire Prevention (10%)

- Develop policies, procedures, and training programs to inform and educate population in fire prevention principles and fire and life safety practices
- Understand proper design, installation, and maintenance of electrical systems and appliances
- Identify the components that, alone or in combination, form emergency and standby power systems
- Understand the dynamics of heating systems
- Identify basic components of and the hazards associated with hot work<sup>1</sup>
- Practice proper storage and handling procedures
- Identify the fire hazards of grinding processes
- Identify common types of refrigeration and associated hazards
- Identify the unique hazards of semiconductor manufacturing
- Identify fire prevention housekeeping basics
- Initiate and track corrective action for life safety and fire protection deficiencies and coordinate hazard abatement solutions with building managers, physical plant personnel, and engineering department
- Safety Control Systems (PLC Safety Controllers, Hardwired Interlock Systems) as it applies to: NFPA 70E, 79, 85 and 86 ANSI/ISA 84.00.01-2003 (IEC 61511) Safety Integrity Levels 1, 2 or 3



## Domain 6: Facility Fire Hazard Management (10%)

- Possess knowledge of property fire insurance, building construction and/or field experience performing fire/property surveys involving detailed analyses
- Be able to observe, examine, inspect, gather data and describe all aspects of a property/building and business Conduct complex inspection surveys of commercial and residential properties to evaluate physical characteristics of a property and business
- Understand and apply related NFPA standards and company requirements and standards
- Possess knowledge of fire services, environmental hazards, and building construction
- Oversee acquisition, installation, operation, maintenance and disposition of building
- Manage the maintenance of building structures
- Evaluate code, law, and regulation compliance of a facility's operations
- Develop and manage emergency preparedness procedures and assure all emergency and procedures are tested as planned
- Understand public protection class and municipal and private water systems

## Domain 7: System Approaches to Property Classes (8%)

- Assess life safety
- Understand fire protection in special occupancies
- Understand fire protection in warehouse and storage operations
- Understand fire protection of electronic equipment

## Domain 8: Organizing for Fire and Rescue Services (5%)

- Perform pre-incident planning for industrial and commercial facilities
- Understand operations of fire loss prevention and emergency organizations
- Understand operations of emergency medical services
- Understand municipal fire prevention and code enforcement operations
- Train fire and emergency services
- Understand operations of fire department facilities and fire training facilities
- Understand operations of public emergency services communication systems
- Understand fire department apparatus and equipment
- Understand the use and function of fire and emergency services protective clothing and protective equipment
- Evaluate fire department resources and the placement thereof

## Domain 9: Materials, Products and Environments (10%)

- Understand explosion prevention and protection
- Understand the precautionary need for various types of air-moving equipment
- Selection, operation, and maintenance of materials-handling equipment



## Domain 10: Detection and Alarm (10%)

- Understand operational characteristics of the modern fire alarm systems
- Understand operational characteristics and proper application of automatic fire detectors
- Understand the benefits and requirements of fire alarm systems interfaced to other systems
- Understand inspection, testing, and maintenance of fire alarm systems
- Plan and administer surveillance and fire guard services for fire protection
- Provide plans review for detection and alarm systems

## Domain 11: Water-Based Suppression (17%)

- Evaluate need for water distribution systems
- Provide plans review for water-based systems
- Identify and understand water supply system requirements
- Identify and understand design criteria for hydraulics for fire protection
- Determine water supply adequacy
- Identify and understand the operating principles of stationary fire pumps
- Understand fine water mist systems and their applications
- Identify and understand the operating principles of automatic sprinkler systems

## Domain 12: Fire Suppression without Water (5%)

- Identify and understand halogen and direct halogen replacement agents and systems
- Provide plans review for non water-based systems
- Identify and understand the properties, proper use/application, and the limitations of carbon dioxide extinguishing agents and application systems
- Identify and understand the properties, proper use/application, and the limitations of both dry and wet chemical extinguishing agents and application systems
- Identify and understand the basic characteristics and applications of various foam extinguishing agents and the methods for producing fire-fighting foam systems
- Identify and understand proper use and maintenance of portable fire extinguishers
- Identify and understand the proper extinguishing agents and application techniques for combustible metal fires
- Care and maintenance of non water-based extinguishing systems

## Domain 13: Confining Fires (5%)

- Understand building construction elements for fire protection
- Understand the following elements of confinement of fire in buildings
- Identify and describe the structural damage factors to be evaluated after a fire
- Identify fire hazards of construction, alteration, and demolition of buildings



## Eligibility Criteria to write CFPS Exam

To be eligible to take the CFPS examination, candidates must demonstrate on the CFPS examination application that they meet one of the following criteria.

- Bachelor's or Master's degree in a Fire Protection-related discipline\* from an accredited college or university, including degrees in engineering fields that are applied to the practice of fire protection; plus TWO years of verifiable work experience dedicated to curtailing fire loss, both physical and financial.
- Associate's degree in a Fire Protection-related discipline\* from an accredited college or university, or a Bachelor's or Master's degree in any unrelated field; plus FOUR years of verifiable work experience dedicated to curtailing fire loss, both physical and financial.
- High school diploma or equivalent, plus SIX years of verifiable work experience dedicated to curtailing fire loss, both physical and financial.

\* Examples include degrees in Fire Protection Engineering, Fire Science, Fire Protection Technology, and Fire Service Administration. Examples of engineering fields that are frequently applied to the practice of fire protection include, but are not limited to, Mechanical, Civil, Chemical, and Electrical engineering.

\* What is work experience dedicated to curtailing fire loss, both physical and financial?

This covers a wide variety of jobs, roles, and industries. If your primary job role involves reducing the risk of fire occurring (design engineering, inspections and code enforcement, etc.), or reducing physical damage, loss of life, or financial loss in the event of a fire (fire service, risk engineering, fire protection system design/installation, etc.), your work experience will apply.



Does BII Online Virtual Training have the same value as traditional classroom training?

Yes, BII Online Virtual Training offers participants; same training system as in-person, i.e face-to-face engagement with instructors, course material, interactive participation of all delegates, and personal support that they would expect to find in a traditional classroom.

What are main features of your online courses? Are they on-demand? Is it different content from the in-person offering?

The content of the virtual training is similar to the in-person sessions and customized presentation makes it a richer online learning experience. As always, we will share presentation materials with attendees for later reference.

The online courses are not on-demand and recordings cannot be purchased. They are set on scheduled dates, live with an instructor and co-host via webinar software. While the day is shorter than an in-person session (4hrs vs 8hrs), timing are adjusted to accommodate attendees in different time zones and allow more time for one-on-one conversations via the Q & A.

What are the technical requirements for participation in a virtual course?

All you need to participate in virtual training are:

- Desktop or Laptop or Tablet Computer, and Internet connection
- Webcam
- Headset with built-in microphone

Can I attend an online training session if I have a Macintosh computer?

Yes, Our Online training systems does allow Macintosh computers, PCs, and computers running Linux to easily enter any of our online training sessions.

What type and version of browser will I need for online classes?

It is recommended that you use the latest version of Firefox, Chrome or Internet Explorer for Windows and Firefox or Safari for Mac. Each of these is available for free download and also suggested you have the PDF Reader

How do I have access to the trainer for questions?

As in the classroom, you will see the trainer in front of you and have the opportunity to ask questions at any time - all via audio and video transmission.

Is there a mute option within an online training session to minimize background noise from my audio connection?

Yes, the Mute button will display to the right of your name as you hover your mouse over your name shown in the Participants panel on the top, right side of the Web conferencing screen.

What if I miss few sessions of the online training program?

The training will be simultaneously recorded which will be provided to you as per request & requirement

Do I get a Certificate at the end?

Yes, you will get a PDF version of your certificate of completion





## Certified Fire Protection Specialist (CFPS)

Date : 24 - 28 June, 2024

Timings : 09:00 - 13:30 Philippines / Malaysia Standard Time

The purpose of the Certified Fire Protection Specialist credential is to recognize, through certification, qualified individuals who are dedicated to curtailing fire loss, both physical and financial. Those also who have acquired a level of professionalism through applied work experiences, related education opportunities and through successful completion of a certification examination.

This 5 Day Online Course will highlight the goal of the CFPS program which is to promote the discipline of fire protection & prevention. A specific degree is not mandatory for obtaining your CFPS designation. The credential is a balance of education, experiences that provides an opportunity for the fire protection specialist to achieve professional recognition.

[CLICK HERE](#) To access this course agenda.

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## Water Supply for Fire Response: Protection & Prevention - Storage, Distribution & Controllers

Date : 09 -11 September, 2024

Timings : 08:00 - 13:00 Philippines / Malaysia Standard Time

The 3-Day Online Water Supplies Course is intended to give the participants an expansive overview of the requirements for the facility, and/or community needs for fire protection. The sessions start with community or corporate risk assessments and calculating the fire flow requirements then follows through on how they are met by the present Water Supplies. The base calculations are also used to verify Fire Department apparatus and equipment needs. The calculations are also used for a variety of Water Supply design and improvements. This is necessary to give the best fire flows while maintaining water portability.

[CLICK HERE](#) To access this course agenda.

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## Fire Protection Handbook Guide

Date : 02 - 04 September, 2024

Timings : 08:00 - 13:00 Philippines / Malaysia Standard Time

The handbooks address all aspects of fire protection in some reference and depth. We cannot be expected to memorize the handbooks in their entirety. However, by design we can quickly find the appropriate information within them. The 3-Day course will assist in learning the different sections of the Handbook and to find the correct information faster & better for its usage and CFPS Exam.

[CLICK HERE](#) To access this course agenda.

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### Facilitator : **John Redden**

Our Expert Trainer is a Global Fire Protection Specialist with 40+ years of experience and demonstrated history of working in the public safety industry. Our Canada based expert holds global qualifications in CFPS from NFPA, Associated of the Institute of Fire Engineering which is focused on Fire Science. Highly skilled in Fire Management, Emergency Management, Confined Space Rescue, Vehicle Extrication and Emergency Medical Services (EMS). He has also completed train the trainer program in Marine Fire Protection and Hazardous Material First Responder.





