

CFBT INSTRUCTOR COURSE INFORMATION SHEET



Course Description

The CFBT Instructor course provides participants with a sound understanding of fire behavior, fire development in a compartment, and fire control principles and practices. In addition, participants learn how to effectively deliver compartment fire behavior training in the classroom, using small scale props, and live fire training in purpose built structures (container based props and burn buildings).

Target Audience

CFBT Instructor is intended for firefighters and fire officers who will be responsible for the delivery of compartment fire behavior training (inclusive of classroom and live fire instruction).

Prerequisites

Participants attending the CFBT Instructor course must have completed CFBT Level I (or equivalent training). This prerequisite is particularly important as this course builds on the knowledge and skill as developed in CFBT Level I.

Participants must be medically and physically qualified to wear self-contained breathing apparatus (SCBA). Occupational Safety and Health Administration (OSHA) Respiratory Protection regulations (29 Code of Federal Regulations (CFR) 1910. 134) require that individuals who wear self-contained breathing apparatus (SCBA) receive an annual medical evaluation and be fit tested for the breathing apparatus used. In addition, this regulation prohibits conditions that may interfere with facepiece seal (e.g., facial hair in the area of the facepiece seal).

NFPA 1981 Standard on Open-Circuit SCBA for Emergency Services (2007) and NFPA 1500 Standard on Fire Department Occupational Safety and Health Program (2007) provide additional information on the medical and physical qualification for the use of SCBA.

Agencies selecting participants for CFBT Instructor training, should consider the following recommendations on minimum qualifications. While student selection is the responsibility of their individual department, it is highly recommended that participants have substantive firefighting and instructional experience

Live fire training presents the same hazards as structural firefighting. The risk to participants must be managed through safe and effective training practices implemented by qualified instructors. Instructors who will deliver live fire training must be well trained and experienced firefighters or fire officers. In addition to technical competence, instructors must consistently demonstrate positive safety behaviors during both training and incident operations.

Certification does not ensure competence. However, it provides externally validated documentation of essential training and assessment of knowledge and skills. Structural live fire

instructors should possess the minimum competencies identified by certification at the following levels:

- Firefighter II
- Fire Instructor I
- Cardiopulmonary Resuscitation-Health Care Provider

It is desirable that instructors be certified at the Emergency Medical Technician-Basic (EMT-B) level or above. If this is not the case, provisions must be made for availability of other medically trained personnel to evaluate participants' medical condition during rehabilitation or in the event of illness or injury.

CFBT instructors who will serve in the role of incident commander or safety officer during live fire training evolutions should also possess the minimum competencies identified by certification at the following levels:

- Fire Officer I
- Incident Safety Officer

Experience **is not** based simply on an individual's years of service. Experience requires participation and learning, simply being there is not enough. While in many fire departments, opportunity to participate in structural firefighting operations is limited, this is an important factor. Limited experience during emergency incidents must be balanced by increased participation in training activities and in particular structural live fire training.

- In fire departments that have a moderate to high level of fire activity, instructors should generally have at least four years as a firefighter before qualification as a live fire instructor.
- In fire departments that have a low level of fire activity, instructors will require additional time to develop the necessary experience. The Department must consider this on a case-by-case basis.

Class Size

Due to the intensive hands on and interactive nature of this program, class size is limited to 12 students. Larger classes may be accommodated, but this requires use of additional instructors and logistical support to ensure participant safety and an effective learning environment.

Credit/Certification

This course is not designed to meet specific certification requirements (however the content of this course meets in part the requirements of NFPA 1001 Standard for Firefighter Professional Qualifications (5.3.10, 5.3.11, 5.3.12, and 6.3.2) and assists the participants in performing instructional responsibilities outlined in NFPA 1403 Standard for Live Fire Training.

Schedule

The 40-hour CFBT Instructor course is generally delivered over five consecutive days. Course delivery integrates classroom instruction, case studies, small-scale lab demonstrations, multiple live fire training

sessions, and participant presentations to further develop the participants knowledge of fire behavior and instructional skill in both the classroom and hands-on, live fire, environments.

Day 1

- Introduction
- Fire Behavior Demonstration 2 (Live Fire)
- Teaching Fundamentals of Fire Behavior
- Teaching Fire Development in a Compartment
- Teaching About Extreme Fire Behavior
- Burning Down the Dolls House
- Introduction to Crew Resource Management (CRM)

Day 2

- Pre-training medical monitoring
- Extreme Fire Behavior Demonstration 1 (Live Fire)
- Teaching Fire Control and Door Entry
- Nozzle Technique and Hose Handling
- Individual Case Study Presentations
- Leadership and CRM
- Fire Attack 1 (Live Fire)

Day 3

- Pre-training medical monitoring
- Fire Attack 2 or 3 (Live Fire)
- Nozzle Technique and Hose Handling
- Influence of Ventilation on Fire Behavior
- Regulations and Standards
- Fire Attack 3 (Live Fire)

Day 4

- Team Case Study Presentations
- CFBT in Acquired Structures
- CFBT in Purpose Build Burn Buildings and Multi-Compartment Cells
- Tactical Exercises

Day 5

- Review
- Exam
- Participant Classroom Presentations

Learning Outcomes

Critical learning outcomes include a sound understanding of practical fire dynamics and the ability to provide safe and effective compartment fire behavior training. Specific learning outcomes are as follows:

Introduction (Classroom)

Participants understand the hazard presented by potential for extreme fire behavior and the need for safe and effective compartment fire behavior training.

- Recognize national trends in the frequency of structure fires.
- Recognize national trends in firefighter injuries and fatalities due to trauma during interior firefighting operations.
- Identify potential causal factors influencing rate of injury and death due to trauma during interior firefighting operations.
- Recognize the limitations in current injury and fatality reporting systems with regards to identifying fatalities, injuries, and near miss events involving extreme fire behavior.
- Understand the underlying concept of compartment fire behavior training (CFBT).
- Identify the instructor's role and responsibilities in ensuring participant safety during CFBT.

Fire Behavior Demonstration 2 (Live Fire)

Participants to understand how to conduct Fire Behavior Demonstration 1 as used in CFBT Level I. Developing competence in conducting this demonstration will require coached practice.

- Understand the CFBT-US standard operating guidelines applicable to conducting Fire Behavior Demonstration 1 and 2.
- Identify the potential problems that might occur while conducting Fire Behavior Demonstration 1 and 2 as well as the appropriate methods for resolving these problems.
- Identify the procedure used to inspect the demo/attack cell prior to use.
- Understand the rationale and procedure for conducting a field inspection of participant personal protective equipment prior to live fire training.
- Recognize the required elements of a pre-training safety and instructional briefing and walk through of the prop used for live fire training.
- Describe the key observations made by participants during Fire Behavior Demonstration 1 and 2.
- Demonstrate basic skill in gas and surface cooling under live fire conditions.
- Explain how the instructor maintains appropriate fire conditions for the duration of Fire Behavior Demonstration 1 and 2.
- Describe the advantages and disadvantages of verbal and non-verbal instructional styles for conducting Fire Behavior Demonstration 1 and 2.
- Explain the post-training debriefing process with particular emphasis on the use of questions to enhance participant learning.

Teaching Fundamentals of Fire Behavior (Classroom)

Participants have the knowledge required to deliver the Fundamentals of Fire Behavior module included in the CFBT Level I curriculum.

- Identify individual knowledge gaps in the fundamentals of fire behavior presented in CFBT Level I.
- Recognize common misconceptions related to the concepts of energy, heat, and temperature.
- Explain basic concepts of thermal dynamics, including: thermal energy, temperature, and methods of heat transfer.
- Recognize the utility and limitations of the fire triangle and fire tetrahedron as models of combustion.
- Explain the concepts of pyrolysis, specific heat, latent heat of vaporization, heat of combustion, and heat release rate.
- Demonstrate laboratory exercises and use of manipulatives used to illustrate fundamental fire behavior concepts.
- Identify audiovisual and web resources for teaching about compartment fire development.

Teaching Fire Development in a Compartment (Classroom)

Participants have the knowledge required to deliver the Fire Development in a Compartment module included in the CFBT Level I curriculum.

- Explain how changes in the built environment (e.g., increased use of synthetics, light weight construction, and energy efficiency) influence compartment fire behavior.
- Use a basic heat release rate curve to explain the stages of compartment fire development and controlled burning regimes (fuel and ventilation controlled).
- Demonstrate the use of manipulatives to illustrate heat release rate during fire development, influence of limited ventilation, and transfer of potential energy from solid to gas phase fuel due to pyrolysis.
- Demonstrate appropriate use of fire dynamics terminology (e.g., plume, ceiling jet, ceiling (hot gas) layer, neutral plane, air track, gravity current) in describing fire development in a compartment.
- Using the oxygen consumption principle (Thornton's Rule), explain changes in fire behavior related to burning regime and changes in ventilation profile.
- Describe how Building, Smoke, Air Track, Heat, and Flame (B-SAHF) indicators relate to fire development and burning regime.
- Identify audiovisual and web resources for teaching about compartment fire development.

Teaching About Extreme Fire Behavior (Classroom)

Participants have the knowledge required to deliver the Extreme Fire Behavior module included in the CFBT Level I curriculum.

- Explain the following extreme fire behavior phenomena with an emphasis on conditions required for them to occur and initiating factors: Flashover, backdraft, smoke explosion, and flash fire.
- Demonstrate the use of manipulatives to illustrate how extreme fire behavior phenomena occur.
- Analyze a case study involving extreme fire behavior and identify causal factors and how the firefighters involved could have prevented, trapped, or mitigated errors that lead to their near miss, injury, or fatality.
- Use the graphical output (Smokeview) from a computational fluid dynamics model (Fire Dynamics Simulator) to explain fire development and extreme fire behavior conditions.
- Describe how Building, Smoke, Air Track, Heat, and Flame (B-SAHF) indicators relate to extreme fire behavior phenomenon.
- Identify audiovisual and web resources for teaching about extreme fire behavior.

Burning Down the (Doll's) House (Laboratory Exercise)

Participants have the knowledge and skills required to deliver the Burning Down the Doll's House module included in the CFBT Level I curriculum.

- Identify the rationale, advantages, and disadvantages of using small scale props for teaching about fire development and extreme fire behavior.

- Understand the CFBT-US standard operating guidelines applicable to use of small scale props for fire behavior demonstrations.
- Recognize the required elements of a pre-training safety and instructional briefing prior to conducting demonstrations using a doll's house.
- Describe the key observations made by participants during the single compartment doll's house demonstration.
- Identify the application of the following small scale props: Single compartment doll's house, two-compartment dolls house, four-compartment dolls house, and vent wall.

Introduction to Crew Resource Management (Classroom)

Participants recognize the applicability of Crew Resource Management principles to the fire service in general and to CFBT in particular.

- Identify how the concept of risk homeostasis applies to the fire service.
- Determine an appropriate risk management profile for CFBT.
- Explain the integration of Helmreich's error management model with the concepts presented in CFBT.
- Describe the concept and basic principles of CRM.
- Explain how effective communication can increase safety during CFBT and on the fireground.
- Identify the how inquiry, advocacy, and assertive behavior can be applied to increase safety during CFBT and on the fireground.

Extreme Fire Behavior Demonstration 1 (Live Fire)

Participants recognize how full-scale demonstrations enhance understanding of fire development, extreme fire behavior, and fire behavior indicators. Participants also understand how to conduct Extreme Fire Behavior Demonstration 1. Developing competence in conducting this demonstration will require coached practice.

- Understand the CFBT-US standard operating guidelines applicable to conducting Extreme Fire Behavior Demonstration 1.
- Identify the potential problems that might occur while conducting Extreme Fire Behavior Demonstration 1 and the appropriate methods for resolving these problems.
- Identify the procedure used to inspect the window cell prior to use.
- Recognize the required elements of a pre-training safety and instructional briefing and walk through of the prop used for live fire training.
- Describe the key observations made by participants during Extreme Fire Behavior Demonstration 1.
- Explain the post-training debriefing process with particular emphasis on the use of questions to enhance participant learning.

Teaching Fire Control and Door Entry (Classroom)

Participants have the knowledge required to deliver the Fire Control and Door Entry module included in the CFBT Level I curriculum.

- Use the heating curve for water to explain the theoretical cooling capacity of water.
- Explain the relationship between heat release rate (fire power) and flow rate (firefighting power).
- Describe and identify the capabilities and limitations of common methods of estimating required flow rate for fire control (Iowa, National Fire Academy, and Hartin or Grimwood Tactical Rate of Flow).
- Explain the influence of where water is converted to steam (hot gas layer or surfaces) on fire control effectiveness and compartment tenability.
- Describe the application of 3D gas cooling, direct, and indirect attack.
- Describe the sequence and purpose of the door entry procedure.
- Explain the concept of dynamic risk assessment and its relationship to size-up and situational awareness.
- Respond to frequently asked questions related to fire control methods and door entry procedures.

Nozzle Technique and Hose Handling (Hands-On)

Participants have the knowledge and skill in door entry procedures, nozzle techniques, and hose handling to deliver the Nozzle Techniques and Hose Handling module in CFBT Level I.

- Demonstrate proficiency in the door entry procedure.
- Demonstrate proficiency in use of short and long pulses, painting, and penciling.
- Demonstrate proficiency in gas cooling while advancing and retreating with a small (e.g. 1 3/4" (45 mm)) hoseline.
- Coach other participants in performance of nozzle techniques and door entry procedures.

Individual Case Study Presentations (Out-of-Class & Classroom)

Participants recognize the hazards presented by live fire training and the steps necessary to mitigate or reduce the risks involved.

Analyze a case study involving a live fire training line-of-duty death (LODD) to determine causal factors and identify appropriate risk management action steps.

Leadership and Crew Resource Management (Classroom)

Participants recognize their role as leaders and the centrality of leadership relationships to CRM during CFBT and on the fireground.

- Explain the concept that teaching is leading.
- Describe the difference between a leader/follower relationship and individuals participating in a leadership relationship.
- Recognize how instructors and participants interact in a leadership relationship during CFBT.

- Identify common errors that impact on safety during CFBT.
- Explain how to maximize situational awareness on the part of all participants during CFBT.
- Describe the potential impact of CRM on your practice as a CFBT Instructor and on your organization.

Fire Attack 1 (Live Fire)

Participants understand how to conduct the Fire Attack 1 evolution. Developing competence in conducting this evolution will require coached practice.

- Understand the CFBT-US standard operating guidelines applicable to conducting Fire Attack 1.
- Identify the potential problems that might occur while conducting Fire Attack 1 and the appropriate methods for resolving these problems.
- Identify the procedure used to inspect the demo/attack cell prior to use.
- Recognize the required elements of a pre-training safety and instructional briefing and walk through of the prop used for live fire training.
- Describe the participant learning outcomes for Fire Attack 1.
- Explain how the instructor maintains appropriate fire conditions for the duration of Fire Attack 1.
- Demonstrate proficiency in gas and surface cooling techniques under live fire conditions.
- Describe the advantages and disadvantages of verbal and non-verbal instructional styles for conducting Fire Attack 1.
- Explain the post-training debriefing process with particular emphasis on the use of questions to enhance participant learning.

Fire Attack 2 (Live Fire)

Participants understand how to conduct the Fire Attack 2 evolution. Developing competence in conducting this evolution will require coached practice.

- Understand the CFBT-US standard operating guidelines applicable to conducting Fire Attack 2.
- Identify the potential problems that might occur while conducting Fire Attack 2 and the appropriate methods for resolving these problems.
- Identify the procedure used to inspect the demo/attack cell prior to use.
- Recognize the required elements of a pre-training safety and instructional briefing and walk through of the prop used for live fire training.
- Describe the participant learning outcomes for Fire Attack 1.
- Explain how the instructor maintains appropriate fire conditions for the duration of Fire Attack 2.
- Demonstrate proficiency in gas cooling while advancing and retreating and surface cooling techniques under live fire conditions.
- Describe the advantages and disadvantages of verbal and non-verbal instructional styles for conducting Fire Attack 2.

- Explain the post-training debriefing process with particular emphasis on the use of questions to enhance participant learning.

Door Entry and Nozzle Technique Drill (Hands-On)

Participants have the knowledge and skill in door entry procedures, nozzle techniques, and hose handling to deliver the Nozzle Techniques and Hose Handling module in CFBT Level I.

- Identify the advantages of using a door entry prop to develop proficiency.
- Explain the concept of deliberate practice and how this applies to developing proficiency in nozzle technique and door entry procedures.
- Demonstrate proficiency in the door entry procedure.
- Demonstrate proficiency in use of short and long pulses, painting, and penciling.
- Demonstrate proficiency in gas cooling while advancing and retreating with a small (e.g. 1 3/4" (45 mm)) hoseline.
- Demonstrate coaching learners in nozzle techniques and door entry procedures.

Influence of Ventilation on Fire Behavior (Classroom)

Participants understand the influence of ventilation on fire development and extreme fire behavior and have the knowledge to deliver the Extreme Fire Behavior module in CFBT Level I.

- Identify common misconceptions related to ventilation strategies and tactics.
- Explain the apparently conflicting influences of ventilation on ventilation controlled fires: Removal of thermal energy (e.g., hot smoke) and increased heat release rate.
- Describe and provide examples of ventilation, unplanned ventilation, tactical ventilation, and tactical anti-ventilation.
- Explain the concept of tactical anti-ventilation and how this relates to the traditional concept of confinement.
- Understand the influence of horizontal and vertical ventilation on fire behavior and the fire environment.

Live Fire Training Regulations & Standards (Classroom)

Participants understand and can conduct live fire training consistent with the requirements of applicable regulations and standards.

- Identify applicable occupational safety and health regulations that are applicable to live fire training.
- Identify national consensus standards that are applicable to live fire training.
- Describe how NFPA 1403 defines live fire training.
- Explain the general provisions of NFPA 1403 that are applicable to CFBT in purpose built props and burn buildings.
- Identify the responsibilities of the authority having jurisdiction (AHJ) with regards to instructor qualification.

- Identify the responsibilities of the instructor-in-charge when conducting live fire training in a purpose built prop or burn building.

Fire Attack 3 (Live Fire)

Participants understand how to conduct the Fire Attack 3 evolution. Developing competence in conducting this evolution will require coached practice.

- Understand the CFBT-US standard operating guidelines applicable to conducting Fire Attack 3.
- Identify the potential problems that might occur while conducting Fire Attack 3 and the appropriate methods for resolving these problems.
- Identify the procedure used to inspect the demo/attack cell prior to use.
- Recognize the required elements of a pre-training safety and instructional briefing and walk through of the prop used for live fire training.
- Describe the participant learning outcomes for Fire Attack 3.
- Explain how the instructor maintains appropriate fire conditions for the duration of Fire Attack 3.
- Demonstrate proficiency in door entry procedures under live fire conditions.
- Demonstrate proficiency in gas cooling while advancing and retreating and surface cooling techniques under live fire conditions.
- Describe the advantages and disadvantages of verbal and non-verbal instructional styles for conducting Fire Attack 3.
- Explain the post-training debriefing process with particular emphasis on the use of questions to enhance participant learning.

Team Case Study Presentations (Out-of-Class & Classroom)

Participants recognize the hazards presented by live fire training and the steps necessary to mitigate or reduce the risks involved.

- Analyze a live fire training LODD case study with regards to compliance with applicable regulations and standards.
- Identify the influence of the level of fire behavior knowledge of the participants on situational awareness and decision-making.
- Analyze a case study involving a live fire training line-of-duty death (LODD) to determine causal factors and identify appropriate risk management action steps.

CFBT & Acquired Structures (Classroom)

Participants understand the hazards presented, regulatory and standards requirements, and risk management strategies used when conducting live fire training in acquired structures.

Note: This course does not substantively address live fire training in acquired structures. However, it is incumbent on CFBT instructors to have an understanding of this type of training.

- Explain the general provisions of NFPA 1403 that are applicable to CFBT in acquired structures and how they differ from those applicable to training in purpose built props and burn buildings.

- Identify the responsibilities of the instructor-in-charge when conducting live fire training in a purpose built prop or burn building.
- Describe how to evaluate a compartment and fuel load to develop a fire behavior prediction.
- Recognize the documentation required when conducting live fire training in an acquired structure.

CFBT in Purpose Built Burn Buildings (Classroom)

Participants can effectively apply CFBT concepts when conducting live fire training in purpose built burn buildings and multi-compartment container based props.

- Identify the performance differences between single compartment container based props and purpose built burn buildings and multi-compartment container based props.
- Explain how to apply CFBT concepts when conducting live fire training in a multi-compartment environment.

Tactical Exercises (Live Fire)

Participants understand how to conduct CFBT tactical exercises. Developing competence in delivery of this type of training will require coached practice.

- Understand the CFBT-US standard operating guidelines applicable to conducting tactical exercises.
- Identify the potential problems that might occur while conducting tactical exercises and the appropriate methods for resolving these problems.
- Identify the procedure used to inspect the cell or purpose built burn building prior to use.
- Recognize the required elements of a pre-training safety and instructional briefing and walk through of the prop used for live fire training.
- Describe the participant learning outcomes for tactical exercises.
- Explain how the instructor maintains appropriate fire conditions for the duration of tactical exercises.
- Demonstrate proficiency in door entry procedures under live fire conditions.
- Demonstrate proficiency in gas cooling while advancing and retreating and surface cooling techniques under live fire conditions.
- Explain the post-training debriefing process with particular emphasis on the use of questions to enhance participant learning.

Participant Student Teaching (Classroom)

Participants demonstrate competence in delivery of compartment fire behavior classroom instruction.

Course Text/Reader

The course text is *3D Firefighting: Training, Techniques, & Tactics* written by Paul Grimwood, Ed Hartin, John McDonough, & Shan Raffel. Each participant will receive an individual copy of the course text. In addition to the course text, there are numerous readings and case studies in the CFBT Instructor Course Reader (provided to the client in PDF format). Participants will also require access to National Fire Protection Association (NFPA) 1403 Standard on Live Fire Training (2007). Participants will also

receive an extensive bibliography of reference materials that are useful in developing a deeper understanding of fire behavior, fire dynamics, firefighting tactical operations and compartment fire behavior training.

Learning Activities, Assignments, & Assessment

The CFBT Instructor course incorporates a wide range of individual and team learning activities including classroom discussion, case studies, and demonstrations as well as hands-on application and live fire exercises.

Participants' knowledge and skills will be assessed through completion of case study presentations, written quizzes, practical exercises, and a written final examination. Successful completion of the instructor course requires participants to demonstrate acceptable performance of skills and a cumulative score of 120 points on quizzes (25 points each) and the final examination (50 points).

Case Study Presentation 1

Each participant will analyze and deliver an informal presentation of a case study (case materials provided) involving a line-of-duty death occurring during live fire training.

Case Study Presentation 2

Teams of participants will analyze and deliver an informal presentation based on a case study involving a live fire training fatality in an acquired structure.

Manipulative Skills

Instructor trainers will evaluate and provide feedback on participant performance during live fire and other hands-on training activities.

Daily Quizzes

Participants will be provided with a quiz at the end of training days one through four. Daily quizzes may be completed outside of class, but additional time is provided at the start of the next training day to complete this assignment. Daily quizzes use predominantly short answer and essay questions to assist participants in mastering course content. Each of the four quizzes has a value of 25 points. Questions in the daily quizzes focus on key concepts and how the participant would answer learner questions. For example, a student is confused about the difference between flashover and backdraft. How would you explain this?

Written Final Examination

The final examination is administered on the morning of the last day of the course and is comprised of short answer and essay questions. The final examination has a value of 50 points. Similar to the daily quizzes, the the final examination focuses on understanding of key concepts and how the participant would answer learner questions.

Task Book

Participants will be provided with a task book following successful completion of training that may be used to document supervised field experience in delivery of compartment fire behavior training. *This element of assessment may be used by the participant's agency at their discretion.*

Facilities & Logistics

There are a number of facility and logistical requirements necessary for effective delivery of the CFBT Instructor course. These include:

Classroom

Required classroom facilities include a white board, projection screen, data projector, and seating at tables for the number of learners who will be participating in the class.

Live Fire Facilities

The CFBT Instructor course can be conducted using a variety of container based props and purpose built burn buildings. Ideally several different facilities should be available to demonstrate the applicability of the methods and techniques in various contexts.

Logistical Support

Logistical requirements include the following:

- Duplication of Student Manuals (PDF file provided)
- SCBA for each participant (including CFBT-US Instructors)
- Students must have personal protective equipment as outlined in NFPA 1403.
- Cascade system or breathing air compressor for cylinder refill
- Drinking water for participant rehab
- Two fire apparatus capable of supplying multiple hoselines flowing 125 gpm
- Water supply to support hands-on training (continuous supply or 3000 gallons on-site)
- Dolls houses for fire development lab exercise (these simple props are constructed from $\frac{3}{4}$ " (16 mm) particle board (plans provided)
- Access to Emergency Medical Services (EMS)
- Fuel for live fire evolutions (approximately 16 sheets of $\frac{1}{2}$ " (12 mm) particleboard depending on the specific prop or live fire training facilities used).

During the initial live fire training evolution, the fuel requirements for the specific props used for the course will be evaluated and adjusted. CFBT-US policy is to use the minimum amount of fuel that will meet specified training objectives (this minimizes risk to participants and waste of fuel materials). Fuel used during CFBT must meet the requirements outlined in NFPA 1403. Standard $\frac{1}{2}$ " (12 mm) particle board serves as a safe and effective fuel for compartment fire behavior training evolutions. This fuel provides predictable fire development and sufficient burn duration to conduct instructional activities. The evolutions conducted during this course typically require no more than 8 sheets of $\frac{1}{2}$ " (12 mm) particle board depending on container configuration. Use of varied types of fuel such as plywood, oriented strand board (OSB) results in a much higher heat release rate and shorter duration of burn. Pallets are an extremely variable fuel (type of wood, configuration, etc.), but are used on a case by case basis in advanced CFBT and CFBT Instructor training.

Instructor Trainers

A minimum of two CFBT Instructor Trainers are required for delivery of the CFBT Instructor course (additional instructors may be needed depending on class size).

All CFBT-US instructor trainers are experienced firefighters and fire officers who have completed CFBT Instructor program and have substantive experience in applying the knowledge and skills presented in this training program in an operational firefighting environment and in delivery of CFBT to diverse fire service audiences. Lead instructor trainers have demonstrated competence in training and evaluation of instructors as well as CFBT program development and implementation.

Training Philosophy

CFBT-US believes that learning is more than simply being present and receiving information. Participants are expected to actively engage in class activities and develop an expanded and deeper understanding of course concepts and basic proficiency in hands-on skills. Classes provide both classroom based and hands-on demonstrations and application activities to provide learners with a variety of ways to develop skill and understanding.

Participants are encouraged to share their experience and be active participants during class sessions. It is likely that information will be presented (either by the instructors or fellow learners) that will challenge participants current views about fire behavior or firefighting methods. Please keep an open mind and evaluate the ideas presented on the basis of both scientific principles and your experience as a firefighter.

Course Policies

Members are encouraged to share their experience and be active participants during class sessions. It is likely that information will be presented (either by the instructors or fellow learners) that will challenge participants current views about fire behavior or firefighting methods. Please keep an open mind and evaluate the ideas presented on the basis of both scientific principles and your experience as a firefighter.

The CFBT Instructor course includes out-of-class reading and preparation for case and instructional presentations. Completion of these assignments is not optional in that participant engagement in course learning activities is an integral part of class activity and development of baseline proficiency as a CFBT Instructor.

Participants have met the prerequisite training requirements outlined in NFPA 1403 and be medically and physically qualified to wear self-contained breathing apparatus (SCBA). In addition, all participants engaged in live fire training evolutions must be equipped with personal protective equipment as outlined in NFPA 1403.

Additional Information

For additional information on the CFBT Level I course or to request a quotation or proposal for delivery at your training facility, visit our web site or contact CFBT-US Chief Instructor Ed Hartin, MS, EFO, MIFireE, CFO.

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