



DEPARTMENT OF FINANCIAL SERVICES

*Division of State Fire Marshal
Bureau of Fire Standards & Training*

Live Fire Training Instructor Program

Title: Master Syllabus

Date: October 20, 2016

Course Title	Live Fire Training Instructor (LFTI)
Course Number	BFST3530, ATPC3530
Prerequisite(s)	Instructor I; Firefighter II
Revision Date	October 20, 2016
College Credit Recommendation	This course does not carry college credits.
Continuing Education Units (CEU's)	This course does not provide CEUs
Class Days/Time	Monday – Friday 8:00 a.m. – 5:00 p.m.
Instructional Supervisor	Name: Dr. Barbara Klingensmith Email: Barbara.Klingensmith@myfloridacfo.com
Program Specialist	Name: Shane Alexander, Burn Master Email: Shane.Alexander@myfloridacfo.com
Class Location	Florida State Fire College
Course Description	This curriculum is designed to deliver a comprehensive live fire training program, within a safe and controlled environment, in accordance with NFPA 1402, NFPA 1403, and NFPA 1500. Both lecture and practical will be used allowing participants to apply knowledge of the above standards to training activities.
Student Learning Outcomes	After the successful completion of this course, the student will be able to do the following: <ol style="list-style-type: none">1. Explain the history of NFPA 1403 and its adoption in Florida.2. Describe how a line-of-duty death impacts an agency.3. Discuss the qualifications of responsibilities of a live fire instructor.4. Discuss their physiologic strains that firefighting puts on a firefighter.5. Describe the process involved in preparing for a live fire training evolution.6. Describe how to prepare an acquired structure for a live fire training evolution.7. Describe the preparation and procedures to use a gas-fired and non-gas-fired structure for live fire training.
Required Textbook	<i>Live Fire Training Principles and Practice (1st ed. Revised)</i> ; Jones and Bartlett (2015) ISBN: 13: 9781284041231
Required Materials	NFPA 1403, 2012 ed., entire publication including appendixes; Florida Administrative Code 69A and 633 (requirements for Live Fire Training for Certified Personnel; requirements for live fire training during recruit

	training; certification prerequisites for live fire training instructor training; live fire instructor training requirements; live fire training certification and renewal and instructor certification revocation); FAC 62.256.700(4) (open burning for the training of firefighters); NFPA 1402
Method of Instruction	Classroom and practical.
Grading	Passing 70%
Certification(s)	Required for Live Fire Training Instructor certification.
Attendance Policy	You are required to attend all sessions of the course and complete all pre-course assignments. Failure to appear in class for a scheduled activity will be considered an absence. Students are allowed to miss 10% of the class and still receive credit. There are no makeup sessions.
Academic Integrity	<p>Academic integrity is crucial to the learning community and indicates respect for the college, the instructor, the course, your classmates and yourself. Any violation of this trust, including but not limited to cheating, plagiarism, collusion, or using or having any content of an un-administered test, will result in immediate dismissal from the course. Under Florida Statute 633, any student dismissed for academic dishonesty can be refused acceptance for any course administered by FSFC.</p> <p>Qualification Description LIVE FIRE TRAINING INSTRUCTOR</p> <p>Training Provider Message You must be certified by the State of Florida as an Instructor I, II, or III AND a Firefighter II. Applications can be made through the Bureau of Fire Standards and Training.</p> <p>Instructor Message You may teach courses for this type of Competency only if you have taken the train-the-trainer course and you hold the certification, and the appropriate level of instructor certification.</p> <p>Pre-Certification Message To be certified as a LFTI in the State of Florida, an individual must successfully complete 40 hours of basic certification training and pass a state written examination. Documentation of training is to be submitted with the required application. Passing score on this state examination is 85% or higher. When taking a state exam, please ensure that your personal profile matches the identification that you plan to produce at Pearsonvue.</p> <p>Renewal Message THIS CERTIFICATION HAS A FOUR YEAR RENEWAL PERIOD.</p>
Students with Disabilities	Any student who has a permanent or temporary disability that may require a reasonable accommodation to participate in the course must present

	documentation of the disability and requested accommodation no later than the beginning of the course.
<i>Emergency Evacuation Policy</i>	<p>Occupants of buildings on the Florida State Fire College campus are required to evacuate and assemble outside when a fire alarm is activated or an announcement is made. Please be aware of the following policies regarding evacuation.</p> <ul style="list-style-type: none"> • Familiarize yourself with all exit doors of the classroom and the building. • Remember that the nearest exit door may not be the one you used when you entered the building. • If you require assistance to evacuate, inform the instructor on the first day of class. • In the event of an evacuation, follow the guidance of the instructor. • Do not re-enter a building unless you are given instructions by Florida State Fire College personnel to do so.
<i>Requesting Emergency Care</i>	Any request for emergency care should be initiated by calling “911” from any phone on campus of the Florida State Fire College. Phones are located in each classroom. Additionally, in the event of any emergency, immediately contact an instructor or staff member.
<i>Critical Event Procedures</i>	<p>Severe Weather – there is a lightning detection system on campus which has an audible 15 second blast of an air horn. If you are outside, please follow your instructor or move to the closest permanent building. Once the threat is over, there will be three 5 second blasts of the signal.</p> <p>Security – During the daytime, security is handled by full time faculty and staff. There are security guards on duty in the evenings and weekends. Please comply with the requests made of security officers. Failure to do so can result in removal from campus.</p> <p>Student Badges – You will be issued a badge to be worn anytime you are on campus.</p>
<i>Enabling Objectives</i>	<p>Given information from discussion and reading materials, the student will perform the following objectives to a written test accuracy of at least 85% and meet the applicable job performance requirements of NFPA 1403 (2012).</p> <p><u>Chapter 1 Introduction to Live Fire Training</u></p> <ol style="list-style-type: none"> 1. Describe the reasons why NFPA 1403, <i>Standard on Live Fire Training</i> was developed. 2. Discuss why Florida has live fire training rules and the impact of Florida Administrative Code 69A and Statute 633. (FL Specific) 3. Describe the purpose of NFPA 1403. 4. Describe the live fire training evolutions covered under NFPA 1403. 5. Describe the additional National Fire Protection Association (NFPA) standards that affect live fire training. 6. Identify the legal requirements associated with live fire training.

7. Discuss line of duty deaths that have occurred in live fire training and the impact /involvement of NFPA 1403. (FL Specific)
8. Discuss Florida's rule on open burning for the training of firefighters. (FL Specific)
9. Discuss the definitions used in NFPA 1403. (FL Specific)
10. Identify referenced publications in NFPA 1403. (FL Specific)
11. Describe the impact of NFPA 1402 on live fire training. (FL Specific)

Chapter 2 Critical Incident Planning

1. Describe the purpose of a line-of-duty significant injury or death plan and its necessity.
2. Describe the role of the National Institute for Occupational Safety and Health's Fire Fighter Fatality Investigation and Prevention Program (NIOSH FFFIPP) following a fire fighter fatality.
3. Describe how to appropriately manage the news media following the injury or death of a participant during a live fire training evolution.
4. Describe the repercussions that a line-of-duty significant injury or death can have on a fire department.
5. Identify objectives for live fire training.

Chapter 3 Preparation and Training of Instructors

1. Describe the necessary prerequisite knowledge and skills for a fire fighter to become a live fire training instructor.
2. Identify the requirements to be a live fire training instructor according to NFPA 1403, *Standard on Live Fire Training Evolutions*.
3. Describe the fire behavior knowledge necessary for a live fire training instructor, including fire dynamics and heat release rate.
4. Describe the standard training evolutions for the live fire instructor candidate.
5. Recognize and explain fire growth dynamics.
6. Identify requirements to become a Live Fire Training Instructor in Florida. (FL Specific)

Chapter 4 Fire Fighter Physiology

1. Describe the cardiovascular and thermal responses to firefighting.
2. Describe how firefighting activity and turnout gear affect cardiovascular and thermal strain.
3. Describe how fitness levels affect cardiovascular and thermal strain.
4. Describe how to prevent injuries, such as heat illness, during firefighting activity and training.
5. Describe the warning signs for heat illnesses that may occur in firefighting activity and training.
6. Describe how high aerobic fitness is necessary to safely and effectively perform firefighting activity.
7. Describe the risk factors for cardiovascular disease.
8. Describe the importance of modifiable risk factors for cardiovascular disease, and describe ways to decrease those factors.
9. Describe the goals of on-site rehabilitation.
10. Define heat stress and relative humidity (FL Specific).
11. Identify the requirements of NFPA 1584. (FL Specific)

Chapter 5 Planning for Live Fire Training

1. Identify prospective structures for live fire training.
2. Define the aspects of the preburn plan for live fire training.
3. Describe the planning steps for live fire training to ensure compliance with NFPA 1403.
4. Describe the planning and legal requirements of NFPA 1403 for live fire training.
5. Identify participants and their roles in live fire training.
6. Describe the student prerequisites for participation in live fire training.
7. Identify water supply needs for live fire training.
8. Identify parking and areas of operation for live fire training.
9. Describe the general order of operations for live fire training.
10. Describe the roles and duties of the safety officer during live fire training.
11. Identify safety hazards in live fire training.
12. Describe the steps needed to mitigate safety hazards during the preparation and operation phases of live fire training.
13. Identify the need for staff and participant rotation during live fire training.
14. Compare the benefits and risks of using acquired structures. (FL Specific)
15. Explain the advantages and disadvantages of using acquired structures. (FL Specific)
16. Identify the steps in building preparation and recognize who should review and approve legal documents to include: (FL Specific)
 - Permits
 - Permission
 - Determination of ownership
 - Evidence of clear title
 - Proof of insurance cancellation
17. List records and reports that must be maintained on all live fire training evolutions. (FL Specific)
18. Identify who is responsible for maintenance and retention of documentation. (FL Specific)
19. Explain the purpose of and recognize how the following forms and/or/documentation are used: (FL Specific)
 - release form
 - notice of cancellation/non-renewal of insurance
 - transfer of authority for the building after live fire training is completed
 - post-training critique
 - check lists
 - Annex C Responsibilities of Personnel

Chapter 6 Acquired Structures

1. Define an acquired structure according to NFPA 1403.

	<ol style="list-style-type: none"> 2. Describe how to perform an initial evaluation on an acquired structure. 3. Identify the responsibilities of the owner of the acquired structure. 4. Identify the information that must be included in the preburn plan for an acquired structure. 5. Describe how to ensure the water supply is adequate for training evolutions. 6. Describe how to prepare an acquired structure for live fire training. 7. Describe how to secure access to the site of the acquired structure. 8. Identify the equipment and supplies required to prepare an acquired structure for live fire training. 9. Identify the precautions to take to ensure proper entry and egress for the acquired structure. 10. Identify the structural elements to evaluate when preparing an acquired structure for live fire training. 11. Describe the steps of preparing the interior of an acquired structure for live fire training. 12. Describe how to ensure the safety of the occupants of the homes and businesses adjacent to the acquired structure. 13. List the equipment and supplies required for live fire training in an acquired structure. 14. Describe how fuel for ignition is prepared safely. 15. Determine the fuel load required to meet the desired learning objectives for the particular evolution. (FL Specific) 16. List the steps to follow prior to the ignition phase. 17. Describe how to ensure safety in preparing for and during the final controlled burn. 18. Describe tasks involved in the overhaul phase. 19. Describe the benefits of a post evolution debriefing. 20. Recognize hazardous containers and identify how they should be handled. 20. Identify how to address modifications to structures and how to prepare the structure for safe training to include: floor openings; missing stairs; chimneys; walls and ceilings; fiberboard and combustible interior finishes; extraordinary weight; vinyl siding, soffits, and rain gutters; overhangs and parapets. 21. Identify hazardous environmental conditions and describe how to handle such hazards. 22. Describe how the following are addressed in order to safely use the structure for live fire training. <ul style="list-style-type: none"> Roof ventilation Asbestos Exits, windows, and doors 23. Explain what should occur if a structure cannot be made safe. 24. Describe how weather affects live fire training exercises. 25. Calculate water supply. (FL Specific) <p><u>Chapter 7 Gas-Fire and Non-Gas-Fired Structures</u></p> <ol style="list-style-type: none"> 1. Identify the codes, standards, and guidelines to consult when building
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	<p>a permanent live fire training structure.</p> <ol style="list-style-type: none"> 2. Discuss how procedures and due diligence are critical in ensuring safety in a permanent live fire training structure. 3. Describe the characteristics of a gas-fired live fire training structure. 4. Discuss the policies that must be followed when working in a gas-fired live fire training structure. 5. Describe the characteristics of a non-gas-fired live fire training structure. 6. Discuss the policies that must be followed when working in a non-gas-fired live fire training structure. 7. Identify the general features in permanent live fire training structures that assist in providing realistic training evolutions. 8. Identify the information that must be included in the preburn plan. 9. Describe how to create the emergency plan and ensure it is implemented correctly. 10. Describe how to ensure the safety of spectators, media, and visitors. 11. Describe how to ensure the water supply is adequate for training evolutions. 12. Describe how to ensure on-site facilities. 13. Describe how to maintain permanent live fire training structures. 14. Describe how to prepare a gas-fired live fire training structure for a safe training evolution. 15. Describe how to prepare a non-gas-fired live fire training structure for a safe training evolution. 16. Describe how to ensure a safe ignition and burn with a gas-fired system. 17. Describe how to ensure a safe ignition with a non-gas-fired system. <p><u>Chapter 8 Nonstructural Training Props</u></p> <ol style="list-style-type: none"> 1. Describe the differences between an acquired prop and a manufactured prop. 2. Discuss the characteristics of a Class A prop. 3. Describe the types of Class A props. 4. Discuss the characteristics of a Class B prop. 5. Identify the information that must be included in the preburn plan for an exterior prop. 6. Describe how to ensure the safety of all participants during live fire training evolutions. 7. Describe how to prepare an exterior prop for safe live fire training. 8. Describe how to ensure a safe ignition with a Class A prop. 9. Describe how to ensure a safe ignition with a Class B prop. 10. List safety considerations when conducting outside training in relation to hazards, terrain and obstructions, ground cover, runoff, and clean up. (FL Specific) 11. List inspections, when they are to be conducted and required documentation for exterior props. (FL Specific) 12. Identify what devices need to be checked prior to any live fire evolution. (FL Specific)
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	<p>13. Describe the procedure for handling debris around props. (FL Specific)</p> <p>14. Determine what fuels will be used in live fire training evolutions and their behavior.</p> <p>15. Identify the impact of NFPA 58 and NFPA 59 on exterior props.</p> <p>16. Describe the procedure for an evolution involving the failure of a safety feature of a gas prop. (FL Specific)</p> <p><u>Chapter 9 Live Fire Training Evolutions</u></p> <ol style="list-style-type: none"> 1. Define a live fire training evolution. 2. Describe the tasks a learning objective performs within a live fire training evolution. 3. List the two types of students who participate in live fire training evolutions. 4. Identify the challenges and concerns in designing a live fire training evolution for a recruit fire fighter. 5. Identify the challenges and concerns in designing a live fire training evolution for an experienced fire fighter. 6. Identify the items discussed during the preburn briefing. 7. Describe the role of the live fire training instructor in ensuring participant safety during a live fire training evolution. 8. Describe the goals of the post evolution debriefing.
<p><i>Practical Applications</i></p>	<p><u>The student shall successfully demonstrate the below JPR's of NFPA 1403 and practical applications.</u></p> <ol style="list-style-type: none"> 1. Develop an appropriate prerequisite training program for students who will be engaged in live fire evolutions. 2. Develop a process to evaluate a student's mastery of the required knowledge and skills. 3. Demonstrate proficiency operating as a live fire training instructor working with interior crews with regards to crew safety and observing fire conditions. 4. Prepare a written preburn plan for an acquired structure to use for live fire training exercises for compliance with NFPA 1403. 5. Prepare a written preburn plan for a permanent live fire training structure to use for live fire training for compliance with NFPA 1403. 6. Conduct a building inspection, identify and remove/control potential hazards, and identify water sources for attack and backup lines listing the exception to the two source rule. 7. Develop a building plan for live fire training in any type of structure. 8. Develop a site plan for live fire training. 9. Develop emergency plans for live fire training. 10. Develop a communication plan for live fire training. 11. Inspect and prepare an acquired structure for live fire training. 12. Inspect and prepare a gas-fired live fire training structure. 13. Inspect and prepare a non-gas-fired live fire training structure. 14. Inspect and prepare an exterior prop for live fire training. 15. Develop clear learning objectives for live fire training evolutions. 16. Conduct a preburn briefing session.

	<ol style="list-style-type: none">17. Make assignments for all crews participating.18. Conduct a walk-through of the acquired structure, burn building or prop.19. Identify property affected by live fire training evolutions.20. Eliminate hazards to visitors and motorists.21. Ensure all permits are obtained and proof of insurance cancellation.22. Assure a properly trained RIC is available for live fire training.23. Assure all safety equipment functions properly prior to evolutions.24. Evaluate structural integrity of all props.25. Develop and utilize a burn sequence matrix chart.26. Maintain required reports.27. Complete required records.28. Function as an IIC or Safety Officer on a live fire training evolution.29. Conduct a live fire training drill from start to finish assuring that all positions, forms, plans, and walkthroughs are conducted following NFPA 1403.30. Prepare adjacent structures and properties for live fire training.31. Conduct training evolutions rotating as an IIC and Safety Officer.32. Complete an IAP for the following evolutions:<ol style="list-style-type: none">1. Gas-fueled building2. Non-gas fired building3. Exterior Class A burn4. Exterior Class B burn5. Vehicle burn33. Utilize command accountability boards.
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