Florida Incident Safety Officer

Title: Master Syllabus
Date: January 2017

Course Title	Florida Incident Safety Officer
Course Number	RN6742
Prerequisite(s)	Firefighter I (206 hrs.) or Firefighter II and Fire Officer I
Revision Date	January 2017
College Credit Recommendation	This course does not have a college recommendation.
Continuing Education Units (CEU's)	40 hours towards Inspector and Instructor recertification.
Class Days/Time	Monday – Friday 8:00 AM – 5:00 PM
Instructional Supervisor	Name: Dr. Barbara Klingensmith Email: Barbara.Klingensmith@myfloridacfo.com
Program Specialist Contact Info	Name: Michael R. Swartz Email: Mike.Swartz@myfloridacfo.com
Class Location	Room 107
Course Description	This course will cover both national and Florida specific information relating to an Incident Safety Officer. Topics include: The Safety Officer's Role; Safety Concepts; Regulations, Codes, Laws, Standards and Procedures; Designing an ISO System; Professional Development; Reading Buildings, Smoke, Risk, Hazardous Energy, and Firefighters; Triggers, Traps and Working within ICS; Basic Approach to ISO Duties; ISO at Structure Fires, Wildland Fires, Haz Mat Incidents and Technical Rescues; and Post Incident Responsibilities.
Student Learning Outcomes	After the successful completion of this course, the student will be able to do the following: 1. Describe the history and roles of the incident safety officer. 2. Discuss safety concepts and apply risk management theories. 3. Identify regulations, codes, laws and standards that apply to ISO. 4. Describe how to design an ISO system. 5. Discuss ISO's requirements for knowledge, skills, and attitude. 6. Identify how to read buildings for signs of collapse and hazards. 7. Identify how to read smoke to give signs of hostile fire events. 8. Explain how firefighters approach risks and the importance of situational awareness. 9. Explain hazardous energy and its impact on emergency scenes. 10. Describe how to read a firefighter and the importance of rehab. 11. List methods to help trigger safe behavior and communication tools

	used by ISOs. 12. Describe the use of checklists and models that ISOs can use within the ICS model. 13. Describe duties and activities of the ISO at structure fires. 14. Describe duties and activities of the ISO at wildland fires. 15. Describe duties and activities of the ISO at HazMat incidents. 16. Describe duties and activities of the ISO at Technical Rescue Incidents. 17. Explain the ISOs responsibilities during post incident critiques and accident investigations.
Required Textbook	*Fire Department Incident Safety Officer, 3rd Edition (2015);* Publisher: Jones & Bartlett Learning; ISBN-978128404195-8
Required Materials	None.
Method of Instruction	Classroom
Grading	Passing 70% (Quizzes 30% Final 40% Individual Presentation 20% Group Presentation 10%)
Certification(s)	One of two classes required for Florida Incident Safety Officer One of four classes required for Safety Officer Certificate of Competency RN4807 COURAGE TO BE SAFE RN6742 FLORIDA INCIDENT SAFETY OFFICER PLUS, FOR SAFETY OFFICER CERTIFICATE RN6741 FLORIDA HEALTH & SAFETY OFFICER RN7529 LEGAL ISSUES FOR SAFETY OFFICER
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	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. Qualification Description: Incident Safety Officer Training Provider: The Bureau will accept courses taught by an approved instructor, and are: delivered within the State of

	Message	Florida by any provider whose course is registered in the Florida Department of Education Statewide Course Numbering System when submitted on the institutions' official transcript; or delivered by the United States Fire Administration - National Fire Academy (NFA) when submitted on the official transcript of the NFA; or delivered by any regionally accredited university or college when submitted on the institutions' transcript; or delivered by other academic providers whose FESHE course is registered with the United States Fire Administration (NFA); or determined by the Division to be equivalent to the Statewide Course Numbering System (SCNS) or Fire and Emergency Services Higher Education (FESHE) program courses.
	Instructor Message	Only courses delivered by qualified instructors will be accepted by the Bureau. Qualified instructors are: Instructors with requisite faculty credentials for the academic institution that is registered in the Florida Department of Education Statewide Course Numbering System to teach the course; or Instructors with requisite faculty credentials as determined by the United States Fire Administration-National Fire Academy; or Instructors with requisite faculty credentials as determined by the respective regionally accredited university or college; or instructors who hold an active Single Course Exemption Certification issued by the Division; or Instructors who hold an active Safety Officer Certificate of Competency issued by the Division and an active Instructor I certification issued by the Division
	Pre-Certification Message	This Incident Safety Officer Certificate of Completion is an advanced training and certification program designed for certified Fire Officers. The applicant shall have completed the prerequisite course entitled "Courage to be Safe". The qualified applicant can obtain this certification by completing the ¿Florida Incident Safety Officer¿ course, possess an active Firefighter Certification of Compliance issued by the Division or have met the curriculum requirements for Firefighter Part I as defined in subsection 69A-37.055(a), F.A.C., and possess an active Fire Officer Certification issued by the Division. The applicant must submit an application and completed form DFS-K4-2139, Incident Safety Officer Task Book. There is no certification exam.
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.
Emergency Evacuation Policy	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. • 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.
Requesting Emergency Care	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.
Critical Event Procedures	**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. **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. **Student Badges –** You will be issued a badge to be worn at anytime you are on campus.
Enabling Objectives	Given information from discussion and reading materials, the student will perform the following objectives to a written test accuracy of at least 70% and meet the applicable job performance requirements of NFPA 1521 (2008). **<u>Chapter 1</u>** 1. Describe the emergence of the safety officer role in fire departments 2. Discuss the history of the fire department safety officer 3. List the National Fire Protection Association Standards (NFPA) standards that affect and pertain to the incident safety officer. 4. Explain the need for an incident safety officer in empirical and image terms. **<u>Chapter 2</u>**

	1. List the three elements that affect safety in the work environment. 2. Discuss the differences between formal and informal processes. 3. List the qualities of a well-written procedure or guideline. 4. Discuss the external influences that influence safety equipment design and purchase. 5. List and discuss the three factors that contribute to a person's ability to act safely. 6. Define risk management. 7. Identify and explain the five parts of classic risk management. **Chapter 3** 1. Explain the motivation for the development of guiding publications. 2. List the significant players and their roles in developing guiding publications. 3. Define the differences between regulations, codes, laws, rules, and guides. 4. List significant publications that can impact the incident safety officer. 5. Become familiar with and discuss Florida Firefighter OSHA (FFOSHA) and how it impacts firefighters and operations in the Florida fire service. 6. Discuss Florida Firefighter OSHA and how it impacts firefighters and operations. **Chapter 4** 1. Discuss the reasoning for preplanning the response of an incident safety officer. 2. List four examples of when an automatic ISO response should take place. 3. List four examples of when an incident commander should automatically delegate the safety responsibility to an ISO. 4. List and discuss the advantages and disadvantages of using various methods to ensure that an ISO arrives on scene. 5. Discuss the authorities suggested for incident safety officers by NFPA standards. 6. List several tools that will help the ISO be effective on scene. **Chapter 5** 1. List the three areas that an ISO must "front-load" to help perform the functions of the ISO. 2. Discuss the concept of "mastery" and its benefit to the ISO. 3. Describe the relationships among knowledge, skill, and attitude. 4. List the three components of an attitude. **Chapter 6** 1. Describe the relationship of loads and load imposition in a building. 2. List the three types of force created when loads are imposed on materials.

	3. Define columns, beams, connections. 4. Explain the effects of fire on building construction elements. 5. Describe the relationship of loads and load imposition in a building. 6. List the three types of force created when loads are imposed on materials. 7. Define columns, beams, connections. 8. Explain the effects of fire on building construction elements. **Chapter 7** 1. Define "smoke". 2. List common hostile fire events and their associated warning signs. 3. List the four attributes of smoke. 4. Describe what each of the four smoke attributes contributes to the understanding of fire behavior in a building. 6. Define "black fire" and its relevance to firefighting efforts. 7. Explain how influencing factors can affect smoke attributes. 8. List the three steps in the reading smoke process. **Chapter 8** 1. Describe the differences between dangerous and risky 2. List the three influences on risk-taking values. 3. List the risk management concepts outlined in NFPA standards. 4. Define situational awareness. 5. Describe three methods to read risk at an incident. 6. Describe the differences between dangerous and risky. 7. List the three influences on risk-taking values. 8. List the risk management concepts outlined in NFPA standards. 9. Define situational awareness. 10. Describe three methods to read risk at an incident. **Chapter 9** 1. Define hazardous energy and list four ways to categorize its status. 2. List common electrical equipment and their associated hazards. 3. List the chemical properties of common utility gases. 4. List the hazards associated with utility water and storm sewer systems. 5. Define hazardous energy and list four ways to categorize its status. 6. List common electrical equipment and their associated hazards. 7. List the chemical properties of common utility gases. 8. List the hazards associated with utility water and storm sewer systems. **Chapter 10** 1. List the three factors that lead to overexertion. 2. List three ergonomic factors that can produce injury. 3. List three strategies to mitigate ergonomic hazards. 4. List the three factors that impact human cell performance. 5. Explain human cell performance chemistry. 6. Define fuel replacement strategies to increase human cell performance.

	7. Discuss the two types of thermal stress. 8. Explain the role of hydration in preventing injuries. 9. Define the four Rs of firefighter rehabilitation. **Chapter 11** 1. List four methods that will help the ISO trigger safe behaviors. 2. List the three ISO "traps" and discuss how each can render the ISO ineffective. 3. Describe the organizational position of the ISO within the ICS. 4. List the two primary communication tools the ISO uses and list guidelines for each. 5. Define the national "typing" scheme and how the ISO function can expand for small and large incident types. **Chapter 12** 1. List two methods to achieve a systematic approach to ISO duties. 2. List several advantages and disadvantages of using checklists, as well as four designs considerations when creating them. 3. Describe the differences between linear and cyclic thinking. 4. List the four components of the ISO Action Model. 5. Describe the four steps that help an ISO become integrated into an incident. 6. List the three ISO general duties applicable to all incident types. 7. List the four personal safety systems that the ISO needs to evaluate. **Chapter 13** 1. Discuss the relationship of risk-taking to incident benchmarks. 2. With respect to structure fires, list the two factors that can help operational effectiveness and the three resource considerations. 3. Name the three communication ingredients to an effective PAR. 4. Define zoning strategies. 5. List four examples where an ISO should request ASO assistance at structure fires. 6. Describe what is meant by "rescue-profile". 7. List the three dimensions that need to be defined during environmental reconnaissance. 8. Name the five crew-exposure considerations. 9. List several unique hazards at strip-mall structure fires. 10. List four ISO functions and six ASO functions at high-rise fires. 11. List the ISO functions at live fire training. 12. Describe Florida's laws regarding live fire training. **Chapter 14** 1. List and describe four incident types that can be applied to the wildland fire. 2. List the three factors that influence fire spread, and define blow-up and flaring.

	3. List the leading stresses requiring rehab at the wildland fire. 4. Describe the types of behaviors that would indicate effective rehab efforts. 5. List four situations that may require the appointment of an ASO at the wildland fire. 6. List the three common principal hazards at a wildland fire. 7. Define LCES. 8. Discuss a troubling issue that may arise when ground firefighters interface with aircraft. **Chapter 15** 1. List the federal regulations that may have an impact on ISO functions at hazmat incidents. 2. Define the reporting structure for an ASO-HM at a hazmat tech-level incident. 3. Define the two overriding risks that the ISO must evaluate at hazardous materials incidents. 4. List the four control zones that need to be established at tech-level hazardous materials incidents. 5. List the three hazardous materials rehabilitation components that require close evaluation. 6. List the ten federal-level components of a hazardous materials response site safety plan and five hazardous materials ancillary plans that may require ISO-signoff. 7. List five or more alarming hazards at a clandestine drug lab incident. 8. List and describe the three strategic goals for the safety section at a WMD/terrorist incident. **Chapter 16** 1. Identify regulations that outline response requirements for tech-rescue incidents. 2. Name the incidents that require or benefit from the assignment of an ASO-RT. 3. Describe the IMS organizational relationship of an ASO-RT at tech-rescue incidents. 4. List the two rehab issues that require special attention at tech rescue incidents and describe the "on-deck" system for crew rotation. 5. Name the four ways to classify a building collapse. 6. List five hazards associated with industrial entrapments. 7. Define "LCES" and how it can be used at a cave-in incident. 8. List six hazards associated with water rescues. 9. List five hazards associated with high-angle rescues. 10. Name five circumstances where a duty ISO should implement a discretionary response to motor vehicle accidents and diagram a strategic approach to protect rescuers at roadway incidents.

	11. Discuss the potential hazards and problems that may have an impact on a railway incident and an aircraft incident. **Chapter 17** 1. Explain the factors that lead to injuries during post-incident operations. 2. Discuss the role of the ISO for informal and formal post-incident analysis (PIA). 3. List the six specific items on which the ISO should provide input for a PIA. 4. Explain the role of the ISO in accident investigation according to NFPA standards. 5. List the five parts of the accident chain. 6. List and explain the three steps of accident investigation.

Instruction Plan Incident Safety Officer

Note: if you are unable to get through the assigned chapters continue them the next day delaying quiz until they are completed.

Activities: Chapters 12 to 15

The instructor should find videos of incidents and have students identify safe and unsafe behaviors. Any mistakes should be traced back to the Safety Triad of personnel, equipment or policies. Some videos are shown with chapters below, but instructor can locate others.

Day 1

Orientation

Review Presentations and Rubrics

Individual Project

Have students bring in their SOP/SOG on ISO assignment for their department. Have them review this in terms of what they learn during the class. Students should write a two-page report on what is good, what could be improved, and how they would structure this to make it better. If you are teaching the class for your individual department, rather than having individual reports, you may want to break the class into groups and have them rewrite the policy implementing the objectives they learned during class. The majority of information for this assignment is covered in the first 2 to 2 ½ days, so the paper is due on Thursday evening to give the instructor time to grade it.

Group Project

Break students into teams of two. The teams must find a LODD report and prepare a 10-minute presentation for the final day. Students should give a synopsis of the case, identify what was done correctly, what needed improvement, and then in the final section explain what they would have done differently had they been the ISO to have a different outcome.

Review Grading

Chapter 1
Chapter 2
Chapter 3
Chapter 4

Day 2
Quiz 1 (Chapters 1 – 4)
Chapter 5
Chapter 6
Flow Paths Video
https://www.youtube.com/watch?v=p9BHgQ2xNXM

Fireground Size-Up and How to Read Smoke
https://www.youtube.com/watch?v=fHUjG5Zt1tM
Chapter 7
Gordon Graham Fire Fighter Risk Management – High Risk / Low Frequency
https://www.youtube.com/watch?v=Yqkne-YZU48

Chapter 8

Day 3
Quiz 2 (Chapters 5 – 8)
Chapter 9
Chapter 10
Chapter 11
Chapter 12
Gear Decon at Scene
https://youtu.be/JTtxW6bOD8U

Principles of Modern Fire Attack: SLICE-RS: Identify and Control the Flow Path
https://www.youtube.com/watch?v=ATuCxWj6AW8

Building Collapse Hitting FF on Ladder
https://www.youtube.com/watch?v=NNzMZcukvUY

Rescue from Burning Building with Ladder and collapse on top
https://www.youtube.com/watch?v=489JxlP6r4M

Chapter 13
Wildland/Urban Interface
https://www.youtube.com/watch?v=WbS0zdVGQu8
Day 4

Quiz 3 (Chapters 9 – 13)
Chapter 14
Chapter 15
Chapter 16
ISO – Recovery Process
https://www.youtube.com/watch?v=URfhh3NkYOY

Chapter 17

Day 5
Quiz 4 (Chapters 14 – 17)
Individual Presentations
Summary of Department's ISO SOP/SOG paper
Group Presentations
LODD review
Final Exam
Certificates Issued

Incident Safety Officer Presentation Rubrics:

The instructor will use this rubric to evaluate each group's presentation. Students can use this rubric to understand what they are being graded on.

Trait	Criteria					
	5	4	3	2	1	
Synopsis (3-4 mins): Include factors such as following IAP, appropriate objectives, ISO appointment, bldg. const., rehab, resources, communication, reading smoke, building, hazardous energy, etc.	Presentation presents facts in a chronological and understandable order.	Presentation included facts but were out of order or did not provide a true representation of scene.	Presentation covered only half of the facts.	Presentation only covered 1/3 of the facts.	Presentation covered less than 1/3 of the facts.	
Application of ISO Concepts: What was done correctly and what was done incorrectly.	Provided both positive and negative examples of ISO duties.	Provided only one side of the ISO concepts.	Covered what was done but did not identify if positive or negative.	No concepts identified.	Didn't attempt to identify what ISO duties were or were not done.	
How Outcome Could Have Been Changed: If I were the ISO, I would have done ….	Applied concepts learned during class.	Explained concept but did not tell how it applied to case.	Identified the concept, but applied it incorrectly.	Wrong concept identified.	No concept identified – or created own.	
Time Frame	8 to 12 minutes	7 – 8 minutes or 13 – 14 mins	6 – 7 mins or 14 – 15 mins	5 – 6 mins or 16 – 17 mins	Less than 5 mins or more than 17 mins	
				Total Points:	20 possible	

The instructor will use this rubric to evaluate each individual's presentation. NAME_____

Trait	Criteria				Points
	1	2	3	4	
Introduction Did the presentation provide key issues to be discussed?	Does not adequately convey topic. Does not describe subtopics to be reviewed. .	Conveys topic, but not key question(s). Describes subtopics to be reviewed.	Conveys topic and key question(s). Clearly delineates subtopics to be reviewed.	Strong introduction of topic's key question(s), terms. Clearly delineates subtopics to be reviewed.	_____
Content Did the presentation have valuable material?	Presentation contained little to no valuable material.	Presentation had moments where valuable material was present but as a whole content was lacking.	Presentation had a good amount of material and benefited the class.	Presentation had an exceptional amount of valuable material and was extremely beneficial to the class.	_____
Organization Was the presentation well organized and easy to follow?	The presentation lacked organi-zation and had little evidence of preparation. Time was 3 minutes less or more than allowed.	There were minimal signs of organization or preparation. Time was 2 minutes less or more than allowed.	The presentation had organizing ideas but could have been much stronger with better preparation. Time was within one minute of allowed time.	The presentation was well organized, well prepared and easy to follow. Time was within established time allowed.	_____
Presentation Did the presenter speak clearly? Was the audience engaged? Was it obvious material had been rehearsed?	Presenter was unconfident and demonstrated little evidence of planning prior to presentation.	Presenter was not consistent with the level of confidence/ preparedness they showed the classroom but had some strong moments.	Presenter was occasionally confident with presentation, however, the presentation was not as engaging as it could have been for the class.	Presenter was very confident in delivery and did an excellent job of engaging the class. Preparation is very evident.	_____

Total Points 16 possible _____