



Instructional Development

Course Plan

Course Details

- Certification:** Instructor II
- CTS Guide:** Instructor II Certification Training Standards Guide (May, 2014)
- Description:** This course provides the skills and knowledge needed for the intermediate level professional instructor to perform his or her duties safely, effectively, and competently. The curriculum is based on the 2012 edition of NFPA 1041 Standard for Fire Service Instructor Professional Qualifications and the 2012 edition of NFPA 1403 Standard on Live Fire Training Evolutions. At the end of this course, candidates for Instructor II certification will be able to develop lesson plans and evaluation instruments, teach and deliver instruction, and evaluate and coach other instructors. The Instructor II will also be able to analyze resources and formulate a program budget.
- Designed For:** Personnel preparing for a college level fire instructor, Company Officer, or SFT Certified Training Instructor position
- Prerequisites:** 1) Instructor I: Instructional Methodology; **OR**
Training Instructor 1A and 1B; **OR**
Fire Instructor 1A and 1B
2) Introduction to the Incident Command System (IS-100.B), FEMA; **OR**
National Incident Management System (IS-700.A), FEMA
- Standard:** Complete all group activities and formative tests. Pass all individual activities without omitting critical criteria as identified on the activity sheet.
Complete all summative tests with a minimum score of 80%.
- Hours:** Lecture and group activities: 12:15
Individual activities (assignments): 5:45
Individual activities (Teaching demonstrations): 20:00 considering 1 hour per student; includes teaching demonstration and feedback

Instructor II

Testing: 2:00

Hours (Total): 40:00 based on 32 students

Maximum Class Size: 32

Instructor Level: SFT Credentialed Instructor. The primary instructor should meet SFT Instructor III qualifications or higher. Alternatively, the primary instructor can meet Instructor II qualifications but must also have completed an intensive FSTEP course in testing as well as an FSTEP course that surveys the areas of testing, audiovisual presentations, e-learning delivery and learning management systems, and group dynamics. Assistant instructors (skills evaluators) should meet Instructor I qualifications or higher.

Instructor/Student Ratio: Lecture 1:32, plus additional skills evaluators as needed to maintain 1:16 ratio for teaching demonstrations.

Restrictions: None. Instructor must submit letter for approval of conditions outside the parameters of normal classroom instruction, e.g. class size exceeds 32, compressed course delivery, distance learning format.

SFT Designation: CFSTES

Required Resources

Instructor Resources

To teach this course, instructors need one of the following:

- *Fire and Emergency Services Instructor, 8th edition*, IFSTA 2012, ISBN 978-0-87939-441-7
- *Fire Service Instructor: Principles and Practice, 2nd edition*, Jones & Bartlett Learning, 2014, ISBN: 9781449670832
- Important points not already covered in the above texts are called out in bullet points below the enabling learning objective (ELO) in each topic.

Copies of local agency policies and procedures for the following, and sample forms, such as:

- Needs analysis
- Purchasing
- Scheduling policy
- Budget policy
- Training records
- Record auditing procedures
- Instructor testing and evaluation
- Test blueprint or planning sheet
- Classroom evaluation
- Online learning safety standards, practices, and risk management

Online Instructor Resources

- Textbook downloadable resources on publisher websites
- Field Operations Guide, ICS 420-1, FEMA
http://www.usfa.fema.gov/downloads/pdf/publications/field_operations_guide.pdf

The following instructor resources are available online at

<http://osfm.fire.ca.gov/training/resources>:

- Cognitive Lesson Plan Format
- Psychomotor Lesson Plan Format
- Test Analysis tool and questionnaire

Student Resources

To participate in this course, students need textbooks, as indicated by the instructor:

- *Fire and Emergency Services Instructor, 8th edition*, IFSTA 2012, ISBN 978-0-87939-441-7
- *Fire Service Instructor: Principles and Practice, 2nd edition*, Jones & Bartlett Learning, 2014, ISBN: 9781449670832

Students may be asked to supply:

- Their own laptop or tablet with presentation or other viewing hardware and/or software

- Other devices as needed for distance learning

Facilities, Equipment, and Personnel

The following facilities, equipment, or personnel are required to deliver this course:

- Standard learning environment or facility, which may include:
- Writing board or paper easel chart
- Markers, erasers
- Amplification devices
- Projector and screen
- Laptop or tablet with presentation or other viewing software
- Access to a computer lab for some sessions
- Access to an outdoor facility for some sessions
- Equipment as needed for student-led demonstrations or psychomotor lessons such as appliances, extinguishers, hose, hand tools, ladders, power tools, protective equipment/clothing, rope, salvage equipment, simulation materials.

Unit 1: Introduction

Topic 1-1: Orientation and Administration

Terminal Learning Objective

At the end of this topic, a student will be able to identify facility and classroom requirements and identify course objectives, events, requirements, assignments, activities, resources, evaluation methods, and participation requirements in the course syllabus.

Enabling Learning Objectives

1. Identify facility requirements
 - Restroom locations
 - Food locations
 - Smoking locations
 - Emergency procedures
2. Identify classroom requirements
 - Start and end times
 - Breaks
 - Electronic device policies
 - Special needs and accommodations
 - Other requirements as applicable
3. Review course syllabus
 - Course objectives
 - Calendar of events
 - Course requirements
 - Student evaluation process
 - Assignments
 - Activities
 - Required student resources
 - Class participation requirements

Discussion Questions

1. What is a formative test? What is a summative test?

Activities

1. Have students complete all required registration forms.

Topic 1-2: Instructor II Certification Process

Terminal Learning Objective

At the end of this topic, a student will be able to identify different levels in the Instructor certification track, the courses and requirements for Instructor II certification, and be able to describe the certification task book and testing process.

Enabling Learning Objectives

1. Identify the different levels of certification in the Instructor II certification track
 - Instructor I

Instructor II

- Instructor II
 - Instructor III
2. Identify the courses required for Instructor II
 - Instructional Development
 3. Identify any other requirements for Instructor II
 4. Describe the certification task book process
 - Complete all prerequisites and course work
 - Submit application and fees to request certification task book
 - Complete all job performance requirements included in the task book
 - Must have identified evaluator verify individual task completion via signature
 - Must have Fire Chief or authorized representative verify task book completion via signature
 - Must be employed by a California Fire Agency in the position prior to submitting completed task book to State Fire Training
 5. Describe the certification testing process
 - Complete coursework
 - Schedule online certification test
 - Schedule skills evaluation test

Discussion Questions

1. How many levels are there in the Instructor certification track? What are they?

Activities

1. To be determined by the instructor.

Topic 1-3: Definitions of Duty

Terminal Learning Objective

At the end of this topic, a student, given the definitions of duty, will be able to define the role of the Instructor II with regard to program management, instructional development, instructional delivery, and evaluation and testing.

Enabling Learning Objectives

1. Describe program management
 - The management of instructional resources, staff, facilities, and records and reports
2. Describe instructional development
 - The development of instructional materials for specific topics
3. Describe instructional delivery
 - Conducting classes using a lesson plan
4. Describe evaluation and testing
 - The development of student evaluation instruments to support instruction and the evaluation of test results

Discussion Questions

1. What is the major difference between an Instructor I and II?
2. What are responsibilities of the Instructor II regarding testing?

Activities

1. To be determined by the instructor.

CTS Guide Reference: CTS 1-1

Unit 2: Instructional Development

Topic 2-1: Creating Lesson Plans

Terminal Learning Objective

At the end of this topic, a student, given a topic, audience characteristics, and an agency-specific standard lesson plan format, will be able to create a lesson plan that addresses JPRs or learning objectives for the topic and includes learning objectives, a lesson outline, course materials, instructional aids, and an evaluation plan.

Enabling Learning Objectives

1. Describe elements of a lesson plan
2. Describe components of learning objectives
3. Describe methods and techniques of instruction
 - Determine methods of delivery that best fit the content
4. Describe principles of adult learning
 - Apply instructional strategies to meet learning styles of each audience
5. Describe techniques for eliminating bias in instructional materials
 - Identify elements of instructional materials that can bias the success of some students over others
 - Identify elements of potential bias inherent in specific agency equipment
6. Select types and application of instructional media
 - Recommend two forms of media to be utilized during instructional delivery
 - State how the chosen instructional media supports the learning objectives
7. Select evaluation techniques
8. Identify sources of references and materials
9. Perform basic research
 - Identify materials to support the learning objective
10. Use JPRs to develop enabling learning objectives
11. Assess student needs
 - Use pre-tests
 - Consider audience characteristics such as new recruits vs. general public
 - Assess students' prior knowledge of equipment, procedures, and features
 - Provide reasonable accommodations for all students
12. Develop instructional media
 - Use instructional media to support learning objectives
 - Comply with U.S. copyright law and respect intellectual property rights
13. Apply outlining techniques
14. Apply evaluation techniques
15. Analyze resource needs

Instructor II

- Determine number of handouts, equipment, software licenses needed
- Match instructional delivery time with number of students and skill being taught to determine sufficiency of resources

Discussion Questions

1. What factors should you consider when creating the lesson plan in order to ensure that you can deliver the learning objective within the allocated time?
2. How does the evaluation step influence the overall lesson plan?
3. What intellectual property rights could be violated in course delivery?

Activities

1. Activity 2-1a: Cognitive Lesson Plan Development
2. Activity 2-1b: Psychomotor Lesson Plan Development

Instructor Notes

1. Lesson plans must include multiple methods of presentation.

CTS Guide Reference: CTS 3-1

Topic 2-2: Modifying Lesson Plans

Terminal Learning Objective

At the end of this topic, a student, given a topic, audience characteristics, and a lesson plan, will be able to modify an existing lesson plan to address the JPRs or learning objectives for the topic; and include learning objectives, the lesson outline, course materials, instructional aids, and an evaluation plan.

Enabling Learning Objectives

1. Describe elements of a lesson plan
2. Describe components of learning objectives
3. Describe methods and techniques of instruction
4. Describe principles of adult learning
5. Describe techniques for eliminating bias in instructional materials
6. Select types and application of instructional media
7. Select evaluation techniques
8. Identify sources of references and materials
9. Perform basic research
 - Identify reason for lesson modification (e.g., AHJ policy)
 - Identify materials to support the modified learning objective
10. Use JPRs to modify enabling learning objectives
11. Assess student needs
12. Modify instructional media
13. Apply outlining techniques
14. Apply evaluation techniques
15. Analyze resource needs

Discussion Questions

1. What factors influence the need to modify a lesson plan?
2. How might you modify instructional media to meet student needs?

Instructor II

3. How can you locate additional references and materials for lesson modification?

Activities

1. Have students modify a prepared lesson plan for specified audiences.

Instructor Notes

1. An Instructor II can modify, or make basic or fundamental changes to the lesson plans, including altering objectives. An Instructor I can adapt a lesson plan for local conditions but not alter lesson objectives. (JBL p. 136)

CTS Guide Reference: CTS 3-2

Unit 3: Instructional Delivery

Topic 3-1: Conducting Classes and Conference Sessions

Terminal Learning Objective

At the end of this topic, a student, given a topic and a target audience, will be able to conduct a class using a lesson plan that the instructor has prepared, using multiple teaching methods and techniques to achieve lesson objectives.

Enabling Learning Objectives

1. Describe use and limitations of teaching methods and techniques
2. Transition between different teaching methods
3. Conduct small group discussions
 - Problem-solving
 - Facilitating consensus

Discussion Questions

1. How would you recognize when you need to implement an alternative method of instruction?
2. What techniques can an instructor employ to keep a small group discussion focused?
3. What media tools could you utilize when leading a small group discussion?

Activities

1. Have students compare and contrast instructional techniques used for leading discussion in small groups vs. a lecture presentation.
2. Activity 3-1a: Cognitive Teaching Demonstration
3. Activity 3-1b: Psychomotor Teaching Demonstration

Instructor Notes

1. Conducting small group discussions is covered in depth in the IFSTA text.

CTS Guide Reference: CTS 4-1

Topic 3-2: Supervising Training Activities

Terminal Learning Objective

At the end of this topic, a student, given a training scenario with increased hazard exposure, will be able to supervise other instructors and students during training to ensure that all participants follow applicable safety standards and practices and meet instructional goals.

Instructor II

Enabling Learning Objectives

1. Describe safety rules, regulations, and practices for training scenarios with increased hazard exposure
 - Consider limitations based on safety equipment being utilized such as age, condition, etc.
 - Applicable codes and regulations include:
 - CAL-OSHA
 - NFPA
 - Manufacturer's guidelines
 - State Fire Training instructor-student ratios, instructor qualifications, site approval, etc.
2. Describe the Incident Command System (ICS)
3. Apply leadership techniques
 - Plan and coordinate all training activities
 - Monitor activities to ensure safe practices
 - Inspect training structure integrity prior to each fire
 - Assign instructors to specific functional and teaching tasks
 - Brief instructors on responsibilities
 - Assign coordinating personnel
 - Ensure adherence to safety practices by all persons within the training area
4. Implement the ICS

Discussion Questions

1. What components of the ICS do you use for all hazards?
2. What components of the ICS would you implement for unique scenarios?
3. What equipment limitations are acceptable in training environments?

Activities

1. Have students assign ICS positions based on simulated scenarios in the ICS Field Operations Guide 420-1.

Instructor Notes

1. Ensure adherence to safety practices by all persons within the training area.

CTS Guide Reference: CTS 4-2

Unit 4: Evaluation and Testing

Topic 4-1: Developing Student Evaluation Instruments

Terminal Learning Objective

At the end of this topic, a student, given learning objectives, audience characteristics, and training goals, will be able to develop student evaluation instruments that determine whether the student has achieved the learning objectives; evaluate relevant performance in an objective, reliable, and verifiable manner; and are bias-free to any audience or group.

Enabling Learning Objectives

1. Describe effective instructional methods and techniques

Instructor II

2. Determine which evaluation methods are the best measures of the desired learning outcome
3. Describe principles of test validity
4. Describe the components of evaluation forms
5. Develop a test planning sheet or test blueprint
6. Construct evaluation items
7. Assemble evaluation instruments
 - Use test bank items if available
 - Verify that test bank items are valid
 - Field test new items according to AHJ procedure

Discussion Questions

1. How does test planning facilitate comprehensive evaluation?
2. What is the process for field testing a new item?

Activities

1. Activity 4-1a: Test Planning Sheet
2. Activity 4-1b: Test Item Construction
3. Activity 4-1c: Test Analysis

Instructor Notes

1. Verify that answers to the test questions generated during Activity 4.1b can be found in assigned student references.
2. Activities 4-1a and 4-1c use Microsoft® Excel® documents that must be opened and manipulated on a computer or other device with spreadsheet software.
3. A simple SUM formula is used in the Test Planning Sheet. For the Test Analysis tool, review the basic calculations involved in analyzing a group of test scores, if necessary.
4. More information about test validity can be found in *Standards for educational and psychological testing* (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 1999).
5. More information about test planning sheets (also called blueprints), item banks, and field testing can be found in texts such as *Developing and Validating Test Items* (Haladayna & Rodriguez, 2013, Routledge).

CTS Guide Reference: CTS 5-1

Topic 4-2: Developing a Class Evaluation Instrument

Terminal Learning Objective

At the end of this topic, a student, given agency policy and evaluation goals, will be able to develop a class evaluation instrument that gives students the ability to provide feedback to the instructor on instructional methods, communication techniques, learning environment, course content, and student materials.

Enabling Learning Objectives

1. Determine which evaluation methods are the best measure of student feedback to the instructor
2. Develop valid evaluation forms

Instructor II

- Questions are worded clearly
- Evaluation questions cover elements of the course
- Includes feedback about facilities, drill ground, or learning environment
- Provides actionable feedback for the instructor about instruction and materials

Discussion Questions

1. What kinds of actionable feedback should an instructor solicit in a class evaluation?
2. What types of rating scales can be used to evaluate aspects of the course (e.g., content, design, instructor, environment)?

Activities

1. To be determined by the instructor.

Instructor Notes

1. none

CTS Guide Reference: CTS 5-2

Unit 5: Program Management

Topic 5-1: Scheduling Instructional Sessions

Terminal Learning Objective

At the end of this topic, a student, given departmental scheduling policy, instructional resources, staff, facilities, and a timeline for delivery, will be able to schedule instructional sessions to ensure delivery of specified sessions according to departmental policy.

Enabling Learning Objectives

1. Describe departmental policy as it relates to course scheduling
2. Describe departmental scheduling processes
3. Describe level of supervision for scheduling training
 - Supervision techniques related to the training being scheduled
 - Active vs. passive supervision depending on courses being scheduled
 - Evaluate level of instructors' expertise with instructor-student ratio needed to deliver courses
4. Describe resource management for scheduling courses

Discussion Questions

1. What are some supervision considerations for scheduling courses?
2. What are some resource management principles to consider when scheduling courses?
3. What challenges do firefighter shift schedules present for scheduling courses?

Activities

1. To be determined by the instructor.

Instructor Notes

1. None

CTS Guide Reference: CTS 2-1

Topic 5-2: Formulating Budget Needs

Terminal Learning Objective

At the end of this topic, a student, given training goals, agency budget policy, and current resources, will be able to formulate budget needs by identifying and documenting the resources required to meet training goals.

Enabling Learning Objectives

1. Describe agency training budget policy
2. Describe resource management for analyzing needs and resources
3. Analyze needs
4. Determine sources of instructional materials and equipment
5. Conduct resource analysis
 - Costs for outside resources
 - Scheduling internal resources
6. Complete required forms
 - Identify AHJ forms required

Discussion Questions

1. What are some low cost alternatives for utilizing training resources that your department does not own?
2. How do you identify what resources are available in your department?

Activities

1. To be determined by the instructor.

Instructor Notes

1. none

CTS Guide Reference: CTS 2-2

Topic 5-3: Acquiring Training Resources

Terminal Learning Objective

At the end of this topic, a student, given identified need for training resources, will be able to acquire and obtain training resources within established timelines and budget constraints, and according to agency policy.

Enabling Learning Objectives

1. Describe agency policies for acquiring training resources
2. Describe purchasing procedures
3. Describe training resource budget management principles
4. Complete required forms

Discussion Questions

1. What are the required forms in your agency for acquiring training resources?
2. What is your agency's standard timeline and deadlines for acquiring training resources?
3. How do you adjust to an emergent need for training or equipment outside of the standard budget planning process?

Activities

1. To be determined by the instructor.

Instructor II

Instructor Notes

1. none

CTS Guide Reference: CTS 2-3

Topic 5-4: Coordinating Record-Keeping

Terminal Learning Objective

At the end of this topic, a student, given training forms, department policy, and a training activity, will be able to coordinate training record-keeping in a way that meets all agency and legal requirements.

Enabling Learning Objectives

1. Describe record-keeping processes
2. Describe departmental policies for record keeping
3. Cite laws affecting records and disclosure of training information
4. Cite professional standards applicable to training records
5. Identify data used for training records
6. Perform training record-auditing procedures
 - Daily procedures
 - Checks required before applying for funding
 - Checks for duplicate records
 - Accuracy of training codes
 - To determine need for make-up training
 - To determine need for new equipment training

Discussion Questions

1. What are the procedures for keeping training records in your agency (e.g., personal data to include or exclude, number of years records are retained)?
2. What forms do you need to be familiar with for the various training certifications?
3. How often are your records audited?

Activities

1. To be determined by the instructor.

Instructor Notes

1. The IFSTA textbook covers record-auditing procedures in depth.

CTS Guide Reference: CTS 2-4

Topic 5-5: Evaluating Instructors

Terminal Learning Objective

At the end of this topic, a student, given an evaluation form, department policy, and JPRs (job performance requirements), will be able to evaluate instructors to identify areas of strengths and weaknesses and recommend changes in instructional style and communication methods, providing opportunity for instructor feedback to the evaluator.

Enabling Learning Objectives

1. Describe personnel evaluation methods
2. Describe supervision techniques

Instructor II

3. Describe agency policy for evaluating instructors
4. Describe effective instructional methods and techniques
5. Apply observation techniques
6. Provide coaching to improve instruction
7. Complete evaluation forms

Discussion Questions

1. What personnel evaluation methods does your agency use?
2. How can coaching develop instructors' skills?

Activities

1. Have students role-play a coaching scenario.
2. Activity 5-5a: Evaluating a Student Instructor's Cognitive Teaching Demonstration as the Primary Evaluator
3. Activity 5-5b: Evaluating a Student Instructor's Psychomotor Teaching Demonstration as the Primary Evaluator

Instructor Notes

1. none

CTS Guide Reference: CTS 2-5

Instructor II

Time Table

Segment	Lecture Time	Activity Time	Total Unit Time
Unit 1: Introduction			
Topic 1-1: Orientation and Administration			
Lecture	00:30		
Activity 1-1: Recommended by SFT		00:15	
Topic 1-2: Instructor II Certification Process			
Lecture	00:15		
Activity 1-2: To be determined by instructor		00:00	
Topic 1-3: Definitions of Duty			
Lecture	00:30		
Activity 1-3: To be determined by instructor		00:00	
Unit 1 Totals	1:15	00:15	1:30
Unit 2: Instructional Development			
Topic 2-1: Creating Lesson Plans			
Lecture	1:00		
Activity 2-1: Cognitive and Psychomotor Lesson Plan Development		2:00	
Topic 2-2: Modifying Lesson Plans			
Lecture	00:30		
Activity 2-2: Recommended by SFT		00:30	
Unit 2 Totals	1:30	2:30	4:00
Unit 3: Instructional Delivery			
Topic 3-1: Conducting Classes and Conference Sessions			
Lecture	3:00		
Activity 3-1: Cognitive and Psychomotor Teaching Demonstrations		1:00 per student = 20:00	
Topic 3-2: Supervising Training Activities			
Lecture	01:00		
Activity 3-2: Recommended by SFT		00:30	
Unit 3 Totals	4:00	20:30	24:30
Unit 4: Evaluation and Testing			
Topic 4-1: Developing Student Evaluation Instruments			

Instructor II

Segment	Lecture Time	Activity Time	Total Unit Time
Lecture	1:30		
Activity 4-1: Test Planning; Test Item Construction; Test Analysis		1:30	
Topic 4-2: Developing a Class Evaluation Instrument			
Lecture	1:00		
Activity 4-2: To be determined by instructor		00:00	
Unit 4 Totals	2:30	1:30	4:00
Unit 5: Program Management			
Topic 5-1: Scheduling Instructional Sessions			
Lecture	00:30		
Activity 5-1: To be determined by instructor		00:00	
Topic 5-2: Formulating Budget Needs			
Lecture	00:30		
Activity 5-2: To be determined by instructor		00:00	
Topic 5-3: Acquiring Training Resources			
Lecture	00:30		
Activity 5-3: To be determined by instructor		00:00	
Topic 5-4: Coordinating Record-Keeping			
Lecture	00:30		
Activity 5-4: To be determined by instructor		00:00	
Topic 5-5: Evaluating Instructors			
Lecture	1:00		
Activity 5-5: Evaluating a Student Instructor's Teaching Demonstrations; other activities recommended by SFT		1:00	
Unit 5 Totals	3:00	1:00	4:00
Lecture, Activity, and Unit Totals	12:15	25:45	38:00

Instructor II

Course Totals

Segment Type	Time
Total Lecture Time (LT)	12:15
Total Activity Time (AT)	25:45
Total Testing Time (TT)	2:00
Total Course Time	40:00