

**Course Outline**

**COURSE:** JFT 5A                      **DIVISION:** 50                      **ALSO LISTED AS:**

**TERM EFFECTIVE:** Fall 2017                      **CURRICULUM APPROVAL DATE:** 10/24/2016

**SHORT TITLE:** FIRE INVESTIGA 1A

**LONG TITLE:** Fire Investigation 1A

<u>Units</u>	<u>Number of Weeks</u>	<u>Type</u>	<u>Contact Hours/Week</u>	<u>Total Contact Hours</u>
1	18	Lecture:	.45	8.1
		Lab:	1.78	32.04
		Other:	0	0
		Total:	2.23	40.14

**COURSE DESCRIPTION:**

This 40 hour course provides an introduction and basic overview of fire scene investigation and investigation tools required to collect, document, and preserve evidence. The focus of this course will be on providing information about the fire scene indicators and determining the fire's origin.

**PREREQUISITE:** JFT 8, Fire Fighter I Academy 1. State Fire Marshall certified basic firefighting academy diploma or equivalent as determined by the Dean of Academy Instruction. **NOTE:** Approval of equivalent training is not a guarantee state regulatory or licensing agencies will also grant equivalency. 2. Prior to beginning this course students must already be familiar with, and be able to demonstrate all of the skills listed below. These will not be taught in the course; rather, they will be the starting point for advanced officer training that builds upon them. These minimum knowledge and skill levels are regarding: Familiarity with penal codes, Familiarity with health codes, Familiarity with structural fires, Familiarity with vehicular fires, Familiarity with wildland fires.

**PREREQUISITES:**

Completion of JFT 8, as UG, with a grade of C or better.

**COREQUISITES:**

**CREDIT STATUS:** D - Credit - Degree Applicable

**GRADING MODES**

L - Standard Letter Grade

**REPEATABILITY:** N - Course may not be repeated

**SCHEDULE TYPES:**

02 - Lecture and/or discussion

03 - Lecture/Laboratory

04 - Laboratory/Studio/Activity

**STUDENT LEARNING OUTCOMES:**

1. Demonstrate an effective and accurate fire investigation(structural, vehicular, wildland, and explosion) in which the fire scene is properly documented and the ignition source is identified.

Measure of assessment: In-Class Scenarios, Skills Exam

Year assessed, or planned year of assessment: Fall 2016

**CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS**

Curriculum Approval Date: 10/24/2016

Lecture Content:

- I. The Role of the Fire Investigator
  - A. Fire Loss in the United States
  - B. Why Fires are Investigated
  - C. Fire Department Organization
  - D. Public Sector Fire Investigators
  - E. Agencies Involved
  - F. Investigator Ethics
  - G. Investigator Organization
  - H. Professional Qualifications
- II. Legal Aspects of Fire Investigation
  - A. Michigan v Tyler
  - B. Michigan v. Clifford
  - C. Authority to Investigate
  - D. Inspection Warrant
  - E. Recommended Consent to Search Form
- III. Expert Testimony
  - A. The Frye Opinion
  - B. Frye v. United States
  - C. Depositions
  - D. Expert Testimony
- IV. Arson Law
  - A. The Criminal Aspects of the Investigation
  - B. Criminal Act of Burning
  - C. Local Codes and Ordinances
  - D. Court Cases and General Intent
  - E. People v. Fry
  - F. People v. Atkins

Lab Content:

- I. Fire Scene Documentation
  - A. Fire Scene Documentation
  - B. Narrative
  - C. Witness Statements
  - D. Evidence
  - E. Photographs
  - F. Diagram
- II. Point of Origin Determination

- A. Point of Origin Defined
- B. Relationship between “Point of Origin” and “Fire Cause”
- C. “Overhaul” Defined
- D. Scene examination Procedure for Point of Origin Identification
- III. Accidental Ignition Sources
  - A. Introduction
  - B. Types of Fires Causes
  - C. Owners and/or Occupants may Misrepresent the Facts of an Accidental Fire
  - D. Major Accidental Fire Causes
- IV. Electrical Ignition Sources
  - A. Home and Commercial Electrical Protective Devices
  - B. Aluminum Wiring and Accidental Fires
  - C. Sources of Investigation Assistance
  - D. Examining Fires of Electrical Origin
  - E. Questions
  - F. Static Electricity as an Accidental Fire
- V. Arson Fire Indicators
  - A. Indicators of Arson Fires
  - B. Multiple Fires
  - C. Trailers
  - D. Presence of Flammable Liquids
  - E. Use of Common Equipment and / or Appliances
  - F. Structural Damage/content Irregularities Prior to the Fire
  - G. Fire Location and Damage
  - H. Absence of all Accidental Fire Causes
  - I. Indicators as “Evidence” of Arson
- VI. Incendiary Devices
  - A. Incendiary Devices Defined
  - B. Incendiary Devices are often Constructed from Readily Available Materials
  - C. Electrical Incendiary Devices
  - D. Mechanical Incendiary Devices
  - E. Chemical Incendiary Devices
  - F. Examples of Common Incendiary Devices
  - G. Incendiary Devices Designed to be Thrown
  - H. Design and Construction
- VII. Structure Fire Investigation
  - A. Tool Selection
  - B. On Arrival
  - C. Basic Information to be Recorded at Incident Scene
  - D. Secure Incident Scene
  - E. Fire Scene Responsibility in Fatal Fire
  - F. Exterior Examination of Structure
  - G. Examine Interior of Structure
  - H. Interviewing
  - I. Incident Scene Investigation for Commercial Occupancies
- VIII. Vehicle Fire Investigation
  - A. Probability of Accidental Vehicle Fires
  - B. Most Modern Vehicles are Designed to Provide Basic Safety from Fire

- C. Vehicles Subject to Arson
- D. Fire Scene Examination
- E. Accomplices and Witnesses
- F. Vehicle Fires other than Automobiles
- G. Ownership and Vehicle registration Numbers
- H. Motives and Vehicle Arson
- I. New Vehicle Emission Control and Fuel System
- VIX. Wildland Fire Investigation
  - A. Wildland Fire Causes
  - B. Fire Scene Examination
  - C. Follow-Up Investigation
  - D. Assistance from other Agencies
  - E. Evidence Collection
- VX. Explosions
  - A. Explosions
  - B. Basic types of Explosions
  - C. Nature of Explosions

**OUT OF CLASS ASSIGNMENTS:**

Required Outside Hours:

Assignment Description: Reading from class text

**METHODS OF INSTRUCTION:**

Lecture, discussion and demonstrations/simulations will serve as the medium of instruction. Audio-visual aids will be utilized as they facilitate meaningful instruction.

**METHODS OF EVALUATION:**

Writing assignments

Percent of total grade: 25.00 %

Percent range of total grade: 25 % to 30 % Other: Written Investigation Reports

Problem-solving assignments

Percent of total grade: 25.00 %

Percent range of total grade: 25 % to 30 % Homework Problems; Quizzes; Exams

Skill demonstrations

Percent of total grade: 25.00 %

Percent range of total grade: 25 % to 30 % Class Performance/s

Objective examinations

Percent of total grade: 25.00 %

Percent range of total grade: 25 % to 30 % Multiple Choice; True/False

**RERESENTATIVE TEXTBOOKS:**

Required Representative Textbooks

State Fire Marshall Office. Fire Investigation 1A Current edition. Sacramento: SFT,2011.

Reading Level of Text, Grade: 12 Verified by: Doug Achterman

**ARTICULATION and CERTIFICATE INFORMATION**

Associate Degree:

CSU GE:

IGETC:

CSU TRANSFER:

Transferable CSU, effective 200130

UC TRANSFER:

Not Transferable

**SUPPLEMENTAL DATA:**

Basic Skills: N

Classification: Y

Noncredit Category: Y

Cooperative Education:

Program Status: 1 Program Applicable

Special Class Status: N

CAN:

CAN Sequence:

CSU Crosswalk Course Department: JFT

CSU Crosswalk Course Number: 5A

Prior to College Level: Y

Non Credit Enhanced Funding: N

Funding Agency Code: Y

In-Service: N

Occupational Course: C

Maximum Hours:

Minimum Hours:

Course Control Number: CCC000340173

Sports/Physical Education Course: N

Taxonomy of Program: 213300