

# Program of Instruction

## Course Syllabus

**Course Title:** Fire & Arson Investigation – Module 1  
**Course Duration:** 40 hours  
**Program:** Investigation  
**Course Prerequisite:** None

**Course Description:** This is the first module of three 40-hour classes designed as the foundational level of education and training for fire and arson investigators. The program meets the Job Performance Requirements of NFPA 1033 “Professional Qualifications for Fire Investigator.” The investigation program includes comprehensive courses covering multiple topics and requiring significant student participation, reading and homework activity. Module 1 includes the following topics: Basic fire science, fire patterns, building systems, electricity and fire, fuel gas systems, fire related human behavior, legal considerations, safety, sources of information and planning the investigation. The text book included with the course is “Fire Investigator: Principles and Practice.” Primary resources for the program are NFPA 921 “Guide for Fire and Explosion Investigations” and “Kirks Fire Investigation.” The practical requirement for the class is a “burn cell” demonstration and investigation. Modules I & II of the program must be taken consecutively. Firefighting gear is not required for the class but old clothes, gloves and work boots are recommended for the practical activity. Students are encouraged to bring personal cameras for use in the practical activity. The text book and NFPA 921 is provided with the program for students to keep and will be distributed the first day of class. These books are utilized for all three modules and students should be sure to bring them to Modules 2 & 3. Students are encouraged to bring any reference material that they feel might be helpful to them.

**Course Requirements and/or Recommendations:** These can be divided into three categories: those completed prior to arriving in class (Pre-Course Work), those completed during class, such as homework assignments and quizzes (Course Work), and requirements completed after class but prior to receiving a certificate of completion. (Post-Course Work)

### Summary of Directions

**Pre-Course Work:** Students will be given access to course information in their course confirmation letters. Be sure to review the power point presentations for the first day of class.

**Course Work:** Students are expected to attend or make up all class hours in this course since it leads to a state level certification. Students are expected to attend class on time and to remain in class for the duration of the course. A student **MUST COMPLETE** all portions of this course, both classroom and practical in order to challenge the end-of-course exam.

**Post-Course Work:** None

**Course Policies:** Students are expected to utilize a “team” approach during course discussions and activities. Students with experience or background in fire investigation are encouraged to share their experiences and help support less experienced students. The investigation program includes comprehensive courses covering multiple topics and requiring significant student participation, reading and homework activity.

**Attendance Policy:** IFSI requires students to attend (100%) or make up all course content that leads to certification. Students are expected to attend on time and to remain in class for the duration of the course. Students **MUST COMPLETE** all portions of a certification course, both classroom and practical, to be eligible to receive their certification.

If a student misses any portion of class with an accumulated absence of 20% or less of scheduled class time, it will be the student’s responsibility to arrange the make-up of the missed course content with the instructor(s) or program manager. The student must make up the specific course content that s/he missed, not just the hours. Make-ups are limited to 20% of scheduled class time. Make-ups must be documented on the class roster. If a student’s absence is greater than 20% refer to “True Emergences” section of the IFSI Examination Policy.

**Safety Policy:** Students shall understand and follow all instructions pertaining to operational safety, as stated by instructors or as written in course materials. Instructors and students shall be mindful of safety at all times. Conduct judged to be unsafe shall be grounds for dismissal from the course.

**Academic Integrity Policy:** IFSI has the responsibility for maintaining academic integrity so as to protect the quality of the education provided through its courses, and to protect those who depend upon our integrity. It is the responsibility of the student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions. Any violation of the code of conduct is grounds for immediate dismissal from the course.

**Grading Policy:** Decisions regarding certificates of course completion shall be made solely by the lead instructor of the course. All grading of exams shall be conducted by the Curriculum/Testing Office. All grading of practical exercises shall be based upon the standards set by the regulatory agency referenced in the course material and IFSI.

Retesting: If a student fails to pass an exam, retesting takes place on set dates at regional sites across the state. More information is provided in the course completion e-mail and on the IFSI website.

**American Disabilities Act:** As guaranteed in the Vocational Rehabilitation Act and in the American Disabilities Act, if any student needs special accommodations they are to notify their instructor and provide documentation as soon as possible so arrangements can be made to provide for the student’s needs. If arrangements cannot be made at the class site, the student will test at an alternative time and place where the special accommodations can be made.

**Evaluation Strategy:**

The instructor will observe individual student participation in the classroom and group discussions. The instructor will collect and review required course material. A written exam utilizing Pro-Board testing standards will be completed by the student with at least 70% accuracy.

**Course Content**

Chapter 1:	Administration
Chapter 2:	Basic Fire Methodology
Chapter 3:	Basic Fire Science
Chapter 4:	Fire Patterns
Chapter 5:	Building Systems
Chapter 6:	Fire Protection Systems
Chapter 7:	Electricity and Fire
Chapter 8:	Fuel Gas Systems
Chapter 9:	Fire-Related Human Behavior
Chapter 10:	Legal Considerations
Chapter 11:	Safety
Chapter 12:	Sources of Information
Chapter 13:	Planning and Preplanning the Investigation

**Textbook:**

"Fire Investigator: Principles and Practice" 4<sup>th</sup> edition, Jones and Bartlett

**Reference List:**

NFPA 1033 "Professional Qualifications for Fire Investigator", 2014 Edition

NFPA 921 "Guide for Fire and Explosion Investigations", 2014 Edition

"Kirk's Fire Investigation"

"Fire Investigator: Principles and Practice" 4<sup>rd</sup> edition, Jones and Bartlett

## Course Schedule:

**40-hour Format: Monday through Friday 8:00am – 5:00pm**

Class Session	Text Chapter	Subject	Duration
1		Course Business & Orientation	1 hour
1		Introduction Activity	1 hour
1	1	Administration	1 hour
1	2	Basic Fire Methodology	2 hours
1	3	Basic Fire Science	2 hours
1		Reading Assignment: Chapters 1 – 6	1 hour (8 hours)
2	4	Fire Patterns	3 hours
2		Curriculum Vitae Introduction	1 hour
2	5	Building Systems	2 hours
2	6	Fire Protection Systems	2 hours
2		Reading Assignment: Chapters 7-13	1 hour (9 hours)
3	7	Electricity and Fire	2 hours
3	8	Fuel Gas Systems	2 hours
3	9	Fire Related Human Behavior	2 hours
3		Documentation Activity	2 hours (8 hours)
4	10	Legal Considerations	2 hours
4	11	Safety	1 hour
4	12	Sources of Information	2 hours
4		Burn Cell Practical	3 hours (8 hours)
5	13	Planning & Preplanning the Investigation	2 hour
5		OSFM K-9 Presentation	3 hour
		Review	1 hour
		Exam	1 hour (7 hours)
			40 Hours Total

Reading Assignments: Chapters 14 – 22

## Course Schedule and Student Reading Assignments:

**Weekend Format: Friday 6:00pm-10:00pm, Saturday & Sunday 8:00am-5:00pm**

Class Session	Text Chapter	Subject	Duration
1 <sup>st</sup> Friday Evening	1	Course Business & Orientation	1 hour
1 <sup>st</sup> Friday Evening		Introduction Activity	1 hour
1 <sup>st</sup> Friday Evening		Administration	1 hour
1 <sup>st</sup> Friday Evening		Reading Assignment: Chapters 1 – 8	1 hour
			(4 hours)
1 <sup>st</sup> Saturday	2	Basic Fire Methodology	2 hours
1 <sup>st</sup> Saturday	3	Basic Fire Science	2 hours
1 <sup>st</sup> Saturday	4	Fire Patterns	3 hours
1 <sup>st</sup> Saturday	5	Building Systems	2 hours
			(9 hours)
1 <sup>st</sup> Sunday	6	Curriculum Vitae Introduction	1 hour
1 <sup>st</sup> Sunday		Fire Protection Systems	2 hours
1 <sup>st</sup> Sunday		Electricity and Fire	2 hours
1 <sup>st</sup> Sunday		Fuel Gas Systems	2 hours
1 <sup>st</sup> Sunday		Reading Assignment: Chapters 9 – 13	1 hour
			(8 hours)
2 <sup>nd</sup> Friday Evening	9	Fire Related Human Behavior	2 hours
2 <sup>nd</sup> Friday Evening		Documentation Activity	2 hours (4 hours)
2 <sup>nd</sup> Saturday	10	Legal Considerations	2 hours
2 <sup>nd</sup> Saturday	11	Safety	1 hour
2 <sup>nd</sup> Saturday	12	Sources of Information	2 hours
2 <sup>nd</sup> Saturday		Burn Cell Practical	3 hours (8 hours)
2 <sup>nd</sup> Sunday	13	Planning & Preplanning the Investigation	2 hours
2 <sup>nd</sup> Sunday		OSFM K-9 Presentation	3 hours
2 <sup>nd</sup> Sunday		Review	1 hour
2 <sup>nd</sup> Sunday		Exam	1 hour (7 hours)
			40 Hours Total
Mod 2 Reading Assignment: Chapters 14 – 22			