

Fire Investigator

Certification Procedure Guide



This Certification Procedure Guide reflects the requirements of:

**NFPA 1033: Standard for Fire Investigator Professional Qualifications,
2022 Edition**

NFPA 921: Guide for Fire and Explosion Investigations, 2024 Edition

Introduction to Fire Investigator Certification

FSTB website:

[Fire Service Training Bureau | Iowa Department of Public Safety](#)

FSTB Certification phone number: 515-727-3447

Candidates wishing to attain national certification at the Fire Investigator level through the Iowa Fire Service Training Bureau Certification System must start the process by attending an FSTB-approved course of instruction prior to registering for and paying the fee for a seat at one of the State's regional examination sites. Per the Iowa Administrative Code Section 251.201(2) examination fees are due at the time of registration and no later than 2 weeks prior to the examination date.

Candidates will register for examinations through their Acadis portal account.

<https://iafstb.acadisonline.com/acadisviewer/login.aspx>

Candidates are given twelve (12) months to complete each certification process. This time limit starts when the candidate takes their FIRST examination for this level (pass or fail).

The initial registration fee is \$50 allows the candidate one (1) attempt to pass the written examination. After this, every RETAKE is charged a \$50 fee. (If the candidate fails the examination, they are charged \$50 to retake the failed exam.

If the twelve (12) month time limit expires and the candidate has not successfully completed all the requirements for this certification process, the candidate's record is archived, and the candidate will have to restart the process.

Fire Investigator - Certification Requirements

Prerequisites:

Candidates pursuing certification at the Fire Investigator level must meet the following conditions:

1. Be a current member of a fire, rescue, or law enforcement organization within the State of Iowa or enrolled in a Fire Science or Criminal Justice program within the Iowa College System. All candidates pursuing certification shall be at least 18 years of age.
2. Primary job role as a Fire Investigator and/or direct involvement in the fire investigation process within the candidate's jurisdiction.
3. Formal course of instruction attendance of either the FSTB 2-week Basic Fire Investigation course or an NFA Basic Fire Investigation course. Course attendance MUST have been within the past 2 years.

An official picture ID (e.g., driver's license, state-issued identification card, military ID, etc.) must be presented for admittance to ANY written and practical skills examination.

Candidates can register for ONLY one exam site at a time. Multiple registrations for the same level examination will be DENIED.

Written Examination:

The Fire Investigator written examination is based on Job Performance Requirements listed in NFPA 1033 - Standard for Fire Investigator Professional Qualifications, 2022 edition.

- The Fire Investigator written examination contains 100 multiple choice and/or true-false questions.
- Candidates are required to score a minimum of 70% on the written examination. Candidates who fail the written examination are responsible for notifying the FSTB of their desire to retake the written examination by registering for another examination site and paying another registration fee of \$50. Candidates may not take the written examination more than once per day.
- This chart shows the maximum time allowed for the written examinations based on the number of questions on the examination.

# of Questions	Time
30	36 Minutes
50	60 Minutes
75	90 Minutes
100	120 Minutes

Fire Investigator Project:

The candidate will conduct and report on 2 investigations in their own jurisdiction (1 accidental, 1 incendiary). Refer to the Scoring Matrix in this Guide for details on what to include in the reports.

Fire Investigator Recertification:

Once a candidate has received their certification as a Fire Investigator, the certification is valid for 3 years from the date of issuance. Periodic reminder emails will be set through the Acadis system informing of the upcoming expiration. Candidates can renew their certification through their Acadis portal account. If the certification is not renewed prior to the deadline, it will be inactivated in the Acadis portal account.

RECERTIFICATION REQUIREMENTS:

1. In the Acadis portal account, click the renew button next to the Fire Investigator certification. Attach and upload the required documentation.
2. Provide written documentation of 30 hours of UNTESTED (informal) training as a student or instructor, or any combination in fire investigation-related courses or seminars. This can be in the form of attendance certificates, such as from the Iowa Chapter of the International Association of Arson Investigators (IAAI) annual conferences, or any other conference dealing with fire/arson investigation.
OR
3. Provide written documentation of 15 hours of TESTED (formal) training (e.g, CFITrainer.net course completion certificates);
AND
4. Submit a letter from the candidate's supervisor listing the candidate's current job description and attesting to the fact that the primary duty of the candidate is fire investigation. The supervisor shall be experienced in fire investigation as well; will review each of the candidate's reports and shall verify the number of fires that the candidate has investigated during the past 3-year period. A minimum of **10** fires, regardless of determination, must have been investigated.
5. Once the documentation has been reviewed and approved, an invoice for the renewal fee of \$25 will be emailed. Payment can be made online.



<i>Practical Skills to be Evaluated</i>	<i>Pass</i>	<i>Fail</i>
4.2 Scene Examination		
4.2.1 Secure the fire ground, given marking devices, sufficient personnel, and special tools and equipment, so that unauthorized persons can recognize the perimeters of the investigative scene and are kept from restricted areas and all evidence or potential evidence is protected from damage or destruction.		
Use of "Fire Line" or "Police Line" tape		
4.2.2 Conduct an exterior survey, given standard equipment and tools, so that evidence is identified and preserved, fire damage is interpreted, hazards are identified to avoid injuries, accessibility to the property is determined, and all potential means of ingress and egress are discovered.		
Assess fire ground and structural condition		
Observe the damage from and effects of the fire, and interpret fire patterns		
4.2.3 Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved, the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.		
Assess fire ground and structural condition		
Observe the damage from and effects of the fire		
Discover the impact of fire suppression efforts on fire flow and heat propagation		
Evaluate protected areas to determine the presence and/or absence of contents		
4.2.4 Interpret fire patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved and in context and relationship with all patterns observed and the mechanisms of heat transfer that led to the formation of the pattern.		
Interpret the effects of burning characteristics on different types of materials		
4.2.5 Interpret and analyze fire patterns, given standard equipment and tools and some structural or content remains, so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized, and all areas of origin are correctly identified.		
Interpret variations of fire patterns on different materials, examining scene from least damage to most		
Correctly recognizes and eliminates false origin area patterns		
Correctly identifies all areas of origin		
Identifies V-patterns, areas of low burning, and of most severe fire damage		
4.2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, potential ignition source(s) is identified, and evidence is preserved without investigator-inflicted damage or contamination.		
Identifies the ignition source(s) and the material(s) ignited		



Use search techniques that incorporate documentation		
Correctly determines the fire cause		
Properly preserves all evidence		
4.2.7 Reconstruct the area of origin, given standard and, if needed, special equipment and tools as well as sufficient personnel, so that all protected areas and fire patterns are identified and correlated to contents or structural remains, items potentially critical to cause determination and photo documentation are returned to their pre-fire location, and the area(s) or point(s) of origin is discovered.		
Examine all materials to determine the effects of fire, identify and distinguish among different types of fire-damaged contents, and return materials to their original position using protected areas and fire patterns		
4.2.8 Inspect the performance of building systems, including detection, suppression, HVAC, utilities, and building compartmentation, given standard and special equipment and tools, so that a determination can be made as to the need for expert resources, an operating system's impact on fire growth and spread is considered in identifying origin areas, defeated and/or failed systems are identified, and the system's potential as a fire cause is recognized.		
Determine the system's operation and its effect on the fire		
Identify alterations to and failure indicators of building systems		
Evaluate the impact of suppression efforts on building systems		
4.2.9 Discriminate the effects of explosions from other types of damage, given standard equipment and tools, so that an explosion is identified and its evidence is preserved.		
Identify explosive effects on glass, walls, foundations, and other building materials		
Distinguish between low- and high-order explosion effects		
Analyze damage to document the blast zone and origin		
4.3 Documenting the Scene		
4.3.1 Diagram the scene, given standard tools and equipment, so that the scene is accurately represented and evidence, pertinent contents, significant patterns, and area(s) or point(s) of origin are identified.		
Sketch the scene noting any significant patterns and area of origin		
Evidence recognition and accurately represents any potential evidence locations		
4.4 Evidence Collection/Preservation		
4.4.1 Utilize proper procedures for managing victims and fatalities, given a protocol and appropriate personnel, so that all evidence is discovered and preserved and the protocol procedures are followed.		
Observational skills and the ability to apply protocols to given situations		
Secures area around victim		
Discovers and preserves all evidence		



Examines area around and under victim		
4.4.2 Locate, document, collect, label, package, and store evidence, given standard or special tools and equipment and evidence collection materials, so that it is properly identified, preserved, collected, packaged, and stored for use in testing, legal, or other proceedings and examinations, ensuring cross-contamination and investigator-inflicted damage to evidentiary items is avoided and the chain of custody is established.		
Ability to recognize different types of evidence and determine whether evidence is critical to the investigation		
Collects and packages evidence to avoid contamination		
4.4.3 Select evidence for analysis, given all information from the investigation, so that items for analysis support specific investigation needs.		
Evaluate the fire incident to determine forensic, engineering, or laboratory needs		
Correctly determines the need for evidence collection and selects appropriate evidence to support cause determination		
4.4.4 Maintain a chain of custody, given standard investigative tools, marking tools, and evidence tags or logs, so that written documentation exists for each piece of evidence and evidence is secured.		
Executed chain of custody procedures by accurately completing a chain of custody form		
4.4.5 Dispose of evidence, given jurisdictional or agency regulations and file information, so that the disposal is timely, safely conducted, and in compliance with jurisdictional or agency requirements.		
Determines if disposal is properly authorized		
Ensures disposal is timely and safely conducted and properly documented		
4.5 Interview.		
4.5.1 Develop an interview plan, so that the plan reflects a strategy to further determine the fire cause and affix responsibility and includes a relevant questioning strategy for each individual to be interviewed that promotes the efficient use of the investigator's time.		
Demonstrate planning skills which reflects a strategy to determine the fire cause		
Develop ten (10) focused questions for specific individuals to be interviewed		
Evaluate of existing file data to help develop questions and fill investigative gaps		
Listing of the ten (10) interview questions shall be submitted		
4.5.2 Conduct interviews, given incident information, so that pertinent information is obtained, follow-up questions are asked, responses to all questions are elicited, and the response to each question is documented accurately.		
Interpret verbal and nonverbal communications		
Exhibit strong listening skills and asks follow-up question		
4.5.3 Evaluate interview information, given interview transcripts or notes and incident data, so that all interview data is individually analyzed and correlated with all other interviews, corroborative and conflictive information is documented, and new leads are developed.		



Demonstrate data correlation skills and the ability to evaluate source information		
Properly analyze all interview data		
Correlate interview data with other interviews		
4.6 Post-Incident Investigation		
4.6.1 Gather reports and records, given no special tools, equipment, or materials, so that all gathered documents are applicable to the investigation, complete, and authentic; the chain of custody is maintained; and the material is admissible in a legal proceeding.		
Identify the reports and documents necessary for the investigation, implement the chain of custody, and organizational skills		
Ensures that documents are appropriate to the investigation		
Implements and maintains the chain of custody for the gathered documents		
Takes precautions so that material is acceptable to the courts		
4.6.2 Evaluate the investigative file, given all available file information, so that areas for further investigation are identified, the relationship between gathered documents and information is interpreted, and corroborative evidence and information discrepancies are discovered.		
Demonstrates information assessment, correlation, and organizational skills		
Identifies areas for further investigation		
Interprets relationship between documents and information		
Identifies corroborative evidence and information discrepancies		
4.6.3 Coordinate expert resources, given the investigative file, reports, and documents, so that the expert's competencies are matched to the specific investigation needs, financial expenditures are justified, and utilization clearly furthers the investigative goals of determining cause or affixing responsibility.		
Apply expert resources to further the investigation by networking with other investigators to identify experts		
Question experts relative to their qualifications		
Develop a utilization plan for use of expert resources		
4.6.4 Establish evidence as to motive and/or opportunity, given an incendiary fire, so that the evidence is supported by documentation and meets the evidentiary requirements of the jurisdiction.		
Conduct financial analysis and records gathering and analysis		
Interview and interpret fire scene information and evidence for relationship to motive and/or opportunity		
4.6.5 Formulate an opinion concerning origin, cause, or responsibility for the fire, given all investigative findings, so that the opinion regarding origin, cause, or responsibility for a fire is supported by the data, facts, records, reports, documents, and evidence.		
Demonstrate analytical and assimilation skills		



Correctly formulates an opinion concerning the origin and cause of the fire		
4.7 Presentations ** PROJECT COMPLETED AFTER COURSE **		
4.7.1 Prepare two (2) written fire investigation reports, The first report shall be based on an investigation found to be accidental. The second report shall be based on an investigation found to be incendiary. Each report shall follow the template format from the provided “ <i>Fire Investigation Scoring Matrix</i> ”. These reports shall incorporate proper use of spelling and grammar. “ These investigations will be conducted after the completion of the Basic Fire Investigator course and in the candidate’s own jurisdiction. ”		
4.7.2 Prepare a 30-minute case presentation, given investigative findings, documentation, and a specific audience, so that the presentation accurately reflects the investigative findings, is concise, expresses the investigator’s opinion, contains facts and data that the investigator relies on in rendering an opinion, contains the reasoning of the investigator by which each opinion was reached, and meets the needs or requirements of the intended audience(s).		
<i>Each presentation shall:</i>		
<i>Include a detailed description of the fire scene:</i> • Date of the fire and investigation		
• Location of the fire		
• Name of responding departments		
• Name of the investigator		
• Description of the involved property		
• Evidence of fire travel		
• Cause indicators		
• Origin determination		
• Fire cause determination (cause must be determined as incendiary or accidental from the scene examination)		
• Any evidence collected		
<i>Presentation must include photographs and a diagram of the scene showing:</i> • General floor plan		
• Fire travel		
• Location of fire cause indicators		



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FIRE INVESTIGATOR PROJECT AFFIDAVIT

THE FIRE SERVICE TRAINING BUREAU OFFERS CERTIFICATION FOR FIRE INVESTIGATOR BASED UPON THE CURRENT EDITION NFPA 1033 STANDARD "STANDARD FOR PROFESSIONAL QUALIFICATIONS FOR FIRE INVESTIGATOR." THIS AFFIDAVIT IS REQUIRED TO BE COMPLETED BY THE CERTIFICATION CANDIDATE'S FIRE CHIEF, FIRE MARSHAL OR LEAD INVESTIGATOR TO VERIFY COMPLIANCE WITH CERTIFICATION PROJECT REQUIREMENTS (TWO FIRE INVESTIGATIONS WITH WRITTEN REPORTS).

BY SIGNING THIS AFFIDAVIT, YOU ARE ENSURING THE FIRE INVESTIGATOR CERTIFICATION CANDIDATE HAS COMPLETED THE FOLLOWING REQUIRED TWENTY-FIVE (25) INVESTIGATIVE SKILLS AND THAT THE CANDIDATE HAS DONE SO INDEPENDENTLY.

Fire Investigator Candidate Name:			
Fire Investigation Address:			
City	State	Zip	County

No.	REQUIRED SKILLS TO BE EVALUATED DURING INVESTIGATIONS	SKILL MASTERED	
		Yes	No
1.	4.2.1 Secure the fire ground		
2.	4.2.2 Conduct an exterior survey		
3.	4.2.3 Conduct an interior survey		
4.	4.2.4 Interpret fire patterns		
5.	4.2.5 Interpret and analyze fire patterns		
6.	4.2.6 Examine and remove fire debris		
7.	4.2.7 Reconstruct the area of origin		
8.	4.2.8 Inspect the performance of building systems		
9.	4.2.9 Discriminate the effects of explosions from other types of damage		
10.	4.3.1 Diagram the scene		
11.	4.4.1 Utilize proper procedures for managing victims and fatalities		
12.	4.4.2 Locate, document, collect, label, package, and store evidence		
13.	4.4.3 Select evidence for analysis		



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14.	4.4.4 Maintain a chain of custody		
15.	4.4.5 Dispose of evidence		
16.	4.5.1 Develop an interview plan		
17.	4.5.2 Conduct interviews		
18.	4.5.3 Evaluate interview information		
19.	4.6.1 Gather reports and records		
20.	4.6.2 Evaluate the investigative file		
21.	4.6.3 Coordinate expert resources		
22.	4.6.4 Establish evidence as to motive and/or opportunity		
23.	4.6.5 Formulate an opinion concerning origin		
24.	4.7.1 Prepare a written report		
25.	4.7.2 Express investigative findings verbally		

By my signature below on this Affidavit, I attest and verify that the above named candidate has competently performed all of the above listed skills during the course of their investigations.

Print Name: _____ Title: _____

Signature: _____ Date: _____

Type of Investigation: Accidental ☐ Incendiary ☐