

# Utah Fire Service Certification System

# FIRE INVESTIGATOR



## CERTIFICATION STANDARD

*NOVEMBER 2014*



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## **Fire Investigator Technical Committee**

The Certification Council would like to recognize and extend a voice of appreciation to the following fire service professionals for their work on this Fire Investigator Certification standard. These individuals devoted many hours to reviewing the National Fire Protection Association (NFPA) 1033 standard, Certification Test Bank, and developing the skills for this standard.

Thank You...

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## **INTRODUCTION**

**In Memoriam,  
September 11, 2001**

The world we live in is changing so fast, and the many phases of the fire service are becoming so technical and complex that fire service training must be utilized to its maximum potential. Any overlap, fragmentation, and lack of basic structure must be eliminated. Standardization is the natural complement and necessity.

The fire service in Utah, through a State Certification Program, can meet the needs of future growth and establish uniformity by certification. We will then have more effective and efficient utilization of resources so as to provide the best possible fire protection service for all the citizens throughout the state of Utah.

The following certification requirements are based on the objectives listed in the National Fire Protection Association (NFPA) 1033 standard for *Professional Qualifications for Fire Investigator*, 2014 Edition, Chapter 4, as verified and adopted by the Utah Fire Service Certification Council (UFSCC).

Through these national standards and certification, firefighters and fire departments have a tool to measure specific levels of skills, abilities and knowledge. The UFSCC believes that by participating in this certification program firefighters and fire departments will be better prepared to provide quality life safety and fire protection for their communities.

We pay tribute to the 343 members of FDNY who gave their lives to save civilian victims on September 11, 2001, at the World Trade Center. They are true American heroes in death, but they were also American heroes in life. We will keep them in our memory and in our hearts. They are the embodiment of courage, bravery, and dedication. May they rest in peace.

# **CERTIFICATION REQUIREMENTS**

## *Entrance Requirements*

In order to certify within the Utah Fire Investigator program, departments/firefighters must fulfill the following requirements:

1. Complete Entrance Requirements.
2. Be certified at the Hazardous Materials level of Awareness with the UFSCC.
3. Certified Fire Inspector I with the UFSCC.
4. Receive and complete the Department Training Record.
5. Train on the required written and practical objectives.
6. Pass a department "In House" practical skills examination.
7. Meet any other training requirements/prerequisites as defined by the Certification Council.
8. Pass both written and practical skills examination administered by the Certification Council.
9. Request Fire Investigator Certification.
10. Request re-certification.

The UFSCC acknowledges the importance of and need for entrance requirements as listed in the NFPA 1033, (2014 edition) standard on *Professional Qualifications for Fire Investigator*. Many agencies and departments have existing policies, regulations, etc. already in place regarding these requirements. The handling of entrance requirements is a **LOCAL MATTER**, outside the authority and jurisdiction of the UFSCC. The Council will not check, test, evaluate or determine how individual agencies meet these requirements. Some departments have found it necessary to waive any type of entrance requirements due to their own special needs. Since this is a local decision, this is permitted. However, due to the amount of physical, mental and emotional stress inherent in this profession, **the Utah Fire Service Certification Council strongly recommends very careful evaluation before altering or doing away with any entrance requirements.**

## *Physical Fitness Requirements*

The requirements listed in NFPA 1001, 2013 ed., Chapter 4 are:

- 1- Meet the minimum educational requirements established by the authority having jurisdiction.
- 2- The Utah Fire Service Certification Council Policy 11.3 requires that a candidate must be 18 years of age to test and be certified.
3. Meet the medical requirements of NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*, chapter 5, subsection 5.1.1, as determined by the medical authority of the AHJ.
4. Physical fitness requirements for entry-level personnel shall be developed and validated by the authority having jurisdiction. Physical fitness requirements shall be in compliance with applicable Equal Employment Opportunity regulations and other legal requirements.

*Additional  
Recommendation*

Due to the nature of the role of a Fire Investigator, the Certification Council strongly suggests that Chief/Administrators conduct a Background Investigation for members of their agency who are tasked with the responsibility of being a Fire Investigator. NFPA 1033, 2014 ed, also makes this recommendation in 1.3.3. The position of the Fire Investigator should be filled by an individual that could withstand an intense investigation by a defense attorney who would look to discredit an investigator. The cost for a Background Investigation is minimal and would be the responsibility of the agency requesting certification.

*Department Training  
Officers*

In order for departments to enroll in the certification process, it is necessary for the department to assign training officers. It is recommended that the department assign at least two personnel as training officers to coordinate and provide certification training.

**Department training officers should be** qualified one level above the level they are teaching. In addition, the Certification Council strongly recommends that training officers be State Certified at the **Instructor I** level.

Department training officer(s) will be responsible for certification training. Their primary responsibility will be to teach, evaluate and in-house test department personnel on the manipulative skill requirements for each level of certification training.

Departments who **do not** have qualified personnel to act as training officers for certification training should contact the Utah Fire and Rescue Academy at 1-888-548-7816 for assistance in setting up and monitoring certification training.

Remember, participation in the certification process is **VOLUNTARY**. Once you have enrolled, you can withdraw if desired.

## DEPARTMENT TRAINING

The position of a Fire Investigator is one that requires a high level of skill and knowledge. The training that is given to and received by a Fire Investigator candidate should be of the highest quality and degree. All training received must meet the requirements of NFPA 1033 Chapter 4 (2014 edition) and the skills as approved by the UFSCC contained within the Utah Standard. All training received must be documented and recorded in the Training Record. All testing for Fire Investigator will be conducted following the Policies and Procedures of the UFSCC.

Training for Fire Investigator can be obtained by completing one of the following training courses or methods to qualify to take the state examination.

- 1- Fire Investigator I Course sponsored by the Utah Fire & Rescue Academy.
- 2- ESFO 2310 – Fire Investigator course as taught by: Utah Valley State College/Utah Fire & Rescue Academy.
- 3- Department Based Training – Departments can create their own Fire Investigator course which meets the requirements as outlined in NFPA 1033 Chapter 4 (2014). A Training Record as given in this standard, must be completed for each person involved in the department based training.

The course material should be referenced to the following textbook(s) to prepare the candidate to successfully pass the State Certification examination.

### *Written Objectives*

Written objectives for Fire Investigator are covered in the following texts:

- **IFSTA, Fire Investigator, 2<sup>nd</sup> Edition, 1<sup>st</sup> Printing**
- **NFPA 1033, *Professional Qualifications for Fire Investigator*, 2014 Edition**
- **NFPA 921, *Guide for Fire and Explosion Investigations*, 2014 Edition.**

These textbooks are available from various fire service bookstores or on the Internet. A current list of textbook sources is available by calling the Certification office at 1-888-548-7816.

There are numerous methods departments have used to help prepare their personnel for the written examination. Considering the high level of skill and knowledge that is required of a Fire Investigator, the Council recommend that the candidate participate in a comprehensive class and receive instruction on both manipulative skills and written requirements.

## *Manipulative Objectives*

Each participant **must** be trained and evaluated in the performance of **all**-manipulative skills as found in this certification standard. Each of the manipulative skill objectives shall be completed swiftly, safely and with competence as defined below:

- **Swiftly** - Each manipulative skill objective must be completed within the allotted time.
- **Safely** - Each manipulative skill objective must be completed safely. Conduct that could injure an individual or damage equipment is unacceptable. Equipment should be checked prior to skill testing or training to see that it is safe and functional.
- **Competence** - Each manipulative skill objective is performed in accordance with the Utah Standard. This includes performing the proper steps in sequence. Competence will be measured in accordance with the UFSCS manipulative skill objectives.

## *Department Training Records*

Each participant shall have a current training record on file with the department which indicates that he/she has trained on all manipulative skill objectives. Training records must have the date and Instructors original signature and/or initials for each line. Departments may set up their own training records or use the one provided in Appendix A.

## *Department "In House" Manipulative Skills Examination*

At the completion of the department's manipulative skills training, the department is required to hold an "in-house" skills examination for the level being trained. This is a comprehensive "in house" skill test conducted by the department training officers. This test is to ensure that skill mastery has been obtained from the beginning to the end of the training process, and to prepare participants for the state examination. Training officers may utilize other personnel to assist in administering the exam; however, all personnel assisting with the testing should be certified at the level they are in-house testing.

Proctor instructions for the examination are in Appendix C. In-house testers shall follow the Proctor Instruction sheet to provide for uniformity and fairness during the exam. It is recommended that participants be given two attempts at any skill. **If they fail on the second try, then they have failed the evaluation and are required to go through additional training by the department trainer.** No training, teaching, or coaching is allowed during the test. After the evaluation, using the test to teach and train is recommended.

If manipulative skill weaknesses are evident, the department shall conduct additional training and hold a new department "in house" manipulative skills examination. Only those participants who successfully pass the department's skills and "In-House" test will be allowed to participate in the State Certification exam. Department Training Records must show that all participants have successfully passed the "in-house" examination.

# CERTIFICATION EXAMINATIONS

## *Written Examinations*

## *Manipulative Skills* *“Spot Check”* *Examination*

After completion of the training process, the Chief/Administrator can request testing for the candidate using the "Request for Examination" form in Appendix D. The candidate will then have three attempts to pass the written examination. A separate application must be sent to the Certification Council for each attempt. Request forms must reach the Certification Council no later than **30 days** prior to the examination date. The entire examination process must be completed within one year of the first written exam date.

The written examination is a randomly generated **100-question**, open book test using NFPA 921, covering the written objectives of the Fire Investigator standard. A minimum score of 70% is required to pass the certification exam. Firefighters failing the first attempt of the written exam will be permitted to retest no sooner than **30 days** from the date of the last exam. Three attempts are given to pass the exam. If a participant fails the written examination three times, he/she has failed the certification process and must wait **1 year** from the date of the last failed exam before re-entering testing. Exam results are forwarded to the Chief/Administrator within 30 days following the receipt of the completed examination.

### SAMPLE WRITTEN EXAMINATION QUESTIONS:

*Civil litigation lawsuits typically involve claims of damages for:*

- a- Death.
- b- Injury.
- c- Property damage.
- d- All of the above.**

*The purpose of fire scene reconstruction is to recreate as nearly as possible the state that existed prior to the fire, allowing the investigator to:*

- a- Show depth of char.
- b- Determine other fire-related criminal acts.
- c- Make a more accurate origin analysis.**
- d- Determine the source of the first material ignited.

This is a two-step examination. The first step is a department records check and the second step is a manipulative skill "spot check" examination. A Certification Tester, appointed by the Utah Fire Service Certification Council, conducts the examination.

Training records are checked. If records are inadequate, corrective action must be taken before proceeding to the next step. The records must meet minimum requirements and are checked for the following:

- 1- Participant has been trained in each manipulative skill and fireground evolution for the level being evaluated.
- 2- A department training officer has signed off each manipulative skill and fireground evolution.

- 3- Each participant has passed a department "in-house" manipulative skills examination.

The manipulative skills and fireground evolution "spot check" examination is graded on a 100% pass/fail basis. The test is graded in the following three areas:

- **Swiftly** - Each manipulative skill objective must be completed within the allotted time.
- **Safely** - Each manipulative skill objective must be completed safely. Conduct that could injure an individual or damage equipment is unacceptable. Equipment should be checked prior to skill testing or training to see that it is safe and functional.
- **Competence** - Each manipulative skill objective is performed in accordance with the Utah Standard. This includes performing the proper steps in sequence. Competence will be measured in accordance with the UFSCS manipulative skill objectives.

Participants are "spot checked" on a minimum of three (3) manipulative skills. No prior notification of the skills being tested will be given. Participants are given two attempts if necessary to perform each skill. If they fail on the second try, then they have failed the examination. Applicants must wait 30 days before the third and final attempt. Participants taking third attempts will test on the skill they failed plus **ONE** additional skill from the section of the standard they failed in the previous two attempts. **No training, teaching, or coaching is allowed during this state test.**

Participants who have failed the third attempt of the written examination or the manipulative skills examination have failed the certification process and must wait **1 year** from the date of the failed third attempt to re-enter state testing. The participant will begin testing with a new 1st attempt of the written examination.

# **FIRE** **INVESTIGATOR** **CERTIFICATION**

*Prerequisites for Fire  
Investigator  
Certification*

*Re-certification*

*For more information  
on Utah Firefighter  
Certification contact  
the:*

When all requirements for certification have been met, applicants are eligible to be certified. The Chief/Administrator may apply to the Utah Fire Service Certification Council for certification for those participants who have successfully completed the certification training/testing process. Request for state certification will be submitted to the Council using the "Request for Certification" form provided in Appendix D. The names are then checked against the official state records to ensure that each individual listed has met all requirements.

Those applicants who have met the requirements are issued a wallet card and certificate. These are sent to the Chief/Administrator for disbursement. There is no cost for testing/certification if the candidate passes their written examination on the first attempt. A \$40 testing/certification fee will be assessed if the candidate passes their written exam on the 2nd attempt, and a \$60 fee will be assessed if the candidate passes their written exam on the 3rd attempt. This fee schedule is applicable as of July 1, 2013.

**\*The above fee table applies to Utah Fire Departments only. All other agencies will be assessed a testing/certification fee of \$40.00 per level.**

Applicants for certification **must** be State Certified through the Utah Fire Service Certification System at the **Hazardous Material Awareness level** and **Fire Inspector I**. Fire Investigator certification **will not** be issued until participants have fulfilled this requirement.

Certification at Fire Investigator Level is valid for a three-year (3) period. Each certified Investigator may renew certification by having the Chief/Administrator of the Participating Agency submit an "Application for Certification/Re-certification" provided in Appendix D.

Each certified Firefighter shall participate in at least 36 hours of structured class and manipulative training per year. A total of 108 hours of training is required during the previous certification period.

**Utah Fire Service Certification Council**  
**Utah Fire and Rescue Academy**  
**3131 Mike Jense Parkway**  
**Provo, Utah 84601**  
**(888) 548-7816**  
[www.uvu.edu/ufra](http://www.uvu.edu/ufra)

**FIRE**  
**INVESTIGATOR**  
**CERTIFICATION**  
**CHECKLIST**

**ENTRANCE REQUIREMENTS:**

- Each participant has met requirements listed in NFPA 1001, Chapter 4 or those established by the authority having jurisdiction.
- Department has filed an "Intent to Participate" form with the UFSCC.

**DEPARTMENT TRAINING RECORDS:**

- Each participant has a training record on file with the department that shows:
  - 1- A learning experience in each manipulative skill objective.
  - 2- Dates of training.
  - 3- Initials of instructors.
- Each participant has trained on the Fire Investigator Level written objectives.

**DEPARTMENT "IN HOUSE" MANIPULATIVE SKILLS EXAMINATION:**

- Each participant has successfully completed an "In House" manipulative skills examination.
- Results of exam are documented in department training records.

**ADDITIONAL TRAINING /PREREQUISITE REQUIREMENTS:**

- Each participant is state certified through the UFSCC at the **Hazardous Material Awareness level and Fire Inspector I level.**

**CERTIFICATION EXAMINATIONS:**

- Each participant has passed the UFSCC written examination.
- Each participant has passed the UFSCC manipulative skill "Spot Check" examination administered by an approved Certification Tester.

**FIRE INVESTIGATOR - CERTIFICATION:**

- Chief/Administrator request certification for participants using the "Request for Certification form.

# FIRE INVESTIGATOR

## SCENE EXAMINATION

1. **Demonstrate securing a fire ground/scene so that unauthorized persons can recognize the perimeters of the investigative scene and are kept from restricted areas and evidence or potential evidence is protected from damage or destruction.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.1  
NFPA 921, 2014, Chapters 1.1, 1.2, 4.3, 13.2.5.2, 17.3.4.1, 29.5.2.4.1

CONDITION: Given marking or barrier devices (i.e., tape, cones, or rope), special tools or equipment that would assist in establishing a perimeter.

COMPETENCE:

- Assess fire/explosion scene.
- Determine initial scope and purpose of investigation.
- Determine the size of the perimeter that is to be established.
- Set up barrier devices.
- Determine entry/exit point.

TIME: 5:00 Minutes

2. **Conduct an exterior survey so that evidence is preserved, fire damage is interpreted, hazards are identified, accessibility to the property is determined and all potential means of ingress and egress are discovered.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.2  
NFPA 921, 2014, Chapters 13.1.2, 15.4.2, 15.4.3, 17.2.1, 17.3.1, 29.5.2.1

CONDITION: Given standard equipment and tools (See Appendix B for list of equipment).

COMPETENCE:

- Assess fire ground for safety hazards.
- Assess structural condition of building.
- Observe and identify exterior damage and effects of the fire.
- Identify and mark any evidence or potential evidence found on the exterior of the fire scene.
- Determine entry/exit point for scene.
- Control access into perimeter with police or firefighter if possible.

TIME: 10:00 Minutes

**3. Conduct an interior survey 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.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.3  
NFPA 921, 2014, Chapters 13.1, 15.4.2, 15.4.3, 17.2.1, 17.3.1, 18.3.1, 29.5.2.1

CONDITION: Given standard equipment and tools (See Appendix B for list of equipment).

COMPETENCE:

- Assess fire ground for safety hazards.
- Assess structural condition of building.
- Observe and identify interior damage and effects of the fire.
- Identify areas that require additional investigation.
- Determine entry/exit point for scene.
- Control access into perimeter with police or firefighter if possible.

TIME: 10:00 Minutes

**4. Interpret burn patterns so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.4  
NFPA 921, 2014, Chapter 6

CONDITION: Given standard equipment and tools (See Appendix B for list of equipment) and structural or content remains.

COMPETENCE:

- Identify the material involved in fire.
- Identify movement and intensity patterns.
- Identify plume generated patterns.
- Identify ventilation generated patterns.
- Identify hot-gas layer generated patterns.
- Identify full-room involvement patterns.
- Identify burn patterns on horizontal surfaces.

TIME: 10:00 Minutes

**5. Correlate burn patterns 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.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.5  
NFPA 921, 2014, Chapters 6 & 18

CONDITION: Given standard equipment and tools (See Appendix B for list of equipment) and some structural or content remains.

COMPETENCE:

- Interpret variations of burn pattern on different materials.
- Contrast and compare burn patterns to determine their relevance to fire spread. (Eliminate patterns caused by suppression activities).
- Identify and use two or more fire patterns to determine area of origin.
- Identify area of low burn. (Eliminate false origin areas).
- Identify and summarize area of fire origin and fire development scenario.

TIME: 10:00 Minutes

**6. Examine and remove fire debris so that all debris is checked for fire cause evidence, the potential ignition source(s) is identified and evidence is preserved without investigator inflicted damage or contamination.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.6  
NFPA 921, 2014, Chapters 17, 18, & 19, 21.2

CONDITION: Given standard equipment and tools (See Appendix B for list of equipment) and some structural or content remains.

COMPETENCE:

- Determine area to remove debris.
- Determine debris to be removed.
- Remove debris in systematic process, examine and facilitate documentation.
- Identify ignition source(s).
- Identify first fuel(s) ignited.
- Determine (to reasonable degree of certainty) the circumstances that brought the fuel and the ignition source together (fire cause).
- Describe the appropriate preservation of evidence.

TIME: 10:00 Minutes

**7. Reconstruct the area of origin so that all protected areas and burn 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.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.7  
NFPA 921, 2014, Chapters 17, 18.3.2, 18.3.2.1, & 19, 21.2

CONDITION: Given standard equipment and tools (See Appendix B for list of equipment) and some structural or content remains.

COMPETENCE:

- Re-create the scene with contents in their pre-fire location.
- Document fire growth patterns.
- Identify and document potential ignition sources.
- Identify and document first material ignited (if possible).
- Document and collect evidence.

TIME: 10:00 Minutes

**8. Inspect the performance of building systems including detection, suppression, HVAC, utilities and building compartmentalization so that a determination can be made as to the need for expert resources, an operating systems 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.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.8  
NFPA 921, 2014, Chapters 7, 9, 10, & 17

CONDITION: Given example(s) of equipment, standard equipment and tools (See Appendix B for list of equipment).

COMPETENCE:

- Identify which type(s) of building system(s) are present in a structure.
- Identify which systems are present in the area of origin.
- Determine if system(s) functioned properly.
- Determine if system(s) impacted fire behavior, growth or extension.
- Document system(s) identified.
- Contact "expert" resources if needed.

TIME: 10:00 Minutes

**9. Discriminate the effects of explosions from other types of damage so that an explosion is identified and its evidence is preserved.**

REFERENCE: NFPA 1033, 2014 Edition, 4.2.9  
NFPA 921, 2014, Chapter 23

CONDITION: Given a scenario and standard equipment and tools (See Appendix B for list of equipment).

COMPETENCE:

- Identify explosive effects on glass, walls, foundations, and other building materials.
- Distinguish between low-and high-order explosion effects.
- Examine scene and area of origin.
- Document items of evidence in area of origin and blast zone.

TIME: 10:00 Minutes

## DOCUMENTING THE SCENE

**10. Diagram the scene so that the scene is accurately represented and evidence, pertinent contents, significant patterns, and origin area(s) or point(s) are identified.**

- REFERENCE: NFPA 1033, 2014 Edition, 4.3.1  
NFPA 921, 2014, Chapters 6, 16, 17 &18
- CONDITION: Given a scenario, standard equipment and tools (See Appendix B for list of equipment).
- COMPETENCE:
- Sketch plot and floor plan of fire building.
  - Sketch layout of the fire scene.
  - Identify location of furniture and other contents.
  - Identify area/points of origin.
  - Identify burn patterns, fire travel paths, smoke patterns and travel.
  - Identify fire detection or suppression systems and devices.
  - Identify location of evidence.
  - Document scene on agency forms.
- TIME: 30:00 Minutes

**11. Photographically document the scene so that the scene is accurately depicted and the photographs support scene findings.**

- REFERENCE: NFPA 1033, 2014 Edition, 4.3.2  
NFPA 921, 2014, Chapter 16.2
- CONDITION: Given standard photographic equipment and tools (See Appendix B for list of equipment).
- COMPETENCE:
- Establish a photo log so that all shots taken can be identified and accounted for.
  - Identify the camera used, indicate on camera (film/disc): name of investigator, time, date and location of incident.
  - Begin on the outside of the fire building, establish the location of the scene, landmarks, and building as it sets in relationship to street.
  - Photograph any evidence found on outside of structure.
  - Photograph burn patterns on outside of structure.
  - Photograph interior rooms in proximity to the fire room that was impacted by the fire.
  - Photograph area/points of origin before, during, and at conclusion of investigative process.
- TIME: 30:00 Minutes

**12. Construct investigative notes so that the notes are accurate, provide further documentation of the scene, and represent complete documentation of the scene findings.**

REFERENCE: NFPA 1033, 2014 Edition, 4.3.3  
NFPA 921, 2014, Chapters 16.3, 16.4

CONDITION: Given available documents (i.e., pre-fire plans, inspection reports and interview information), standard equipment and tools (See Appendix B for list of equipment).

COMPETENCE:

- Select correct form or use appropriate document for investigative notes.
- Identify date, time, investigator, and location.
- Record facts and actual observations related to the fire scene.
- Be complete, avoid inclusion of personal comments or opinions.
- Use a systematic and consistent method when writing field notes.
- Establish a case file for incident.

TIME: 30:00 Minutes

## **EVIDENCE COLLECTION / PRESERVATION**

**13. Utilize proper procedures for managing victims and fatalities so that all evidence is discovered and preserved and protocol procedures are followed.**

REFERENCE: NFPA 1033, 2014 Edition, 4.4.1  
NFPA 921, 2014, Chapter 25.6

CONDITION: Given a scenario, protocol and appropriate personnel.

COMPETENCE:

- Identify victim(s) and or fatalities.
- Secure the scene.
- Notify appropriate agencies (i.e. law enforcement, county attorney, medical examiner, and state fire marshal's office).
- Establish lead investigator/case manager.
- Conduct investigation utilizing unified command structure.

TIME: 10:00 Minutes

**14. Locate, collect, and package evidence so that evidence is identified, preserved, collected, and packaged to avoid contamination and investigator inflicted damage and the chain of custody is established.**

REFERENCE: NFPA 1033, 2014 Edition, 4.4.2  
NFPA 921, 2014, Chapter 17

CONDITION: Given a scenario, standard or special tools and equipment and evidence collection materials.

COMPETENCE:

- Identify evidence to be collected.
- Document specific location of the item at the scene.
- Photograph shows the evidence as it was found and its relationship to other items.
- Document a description of the evidence and any unique markings or labeling.
- Document date, time and location the evidence was collected.
- Identify the investigator who located the evidence and removed it from the scene.
- Demonstrate proper evidence collection method to avoid cross contamination.

TIME: 20:00 Minutes

**15. Select evidence for analysis so that items for analysis support specific investigative needs.**

REFERENCE: NFPA 1033, 2014 Edition, 4.4.3  
NFPA 921, 2014, Chapters 16, 17

CONDITION: Given information from the investigative file.

COMPETENCE:

- Determine location and size of sample to be taken.
- Select appropriate tool to collect sample with and appropriate container to place sample in.
- Collect sample and place in container.
- Determine location and size of comparison sample to be taken.
- Select appropriate tool to collect comparison sample with and appropriate container to place comparison sample in.
- Collect comparison sample and place in container.
- Document (photograph and description) of sample location, time, date, investigator and incident number on container.
- Maintain chain of custody for samples.

TIME: 20:00 Minutes

**16. Maintain a chain of custody so that written documentation exists for each piece of evidence and evidence is secured.**

REFERENCE: NFPA 1033, 2014 Edition, 4.4.4  
NFPA 921, 2014, Chapters 17.5, 17.6, 17.7, 17.9

CONDITION: Given standard investigative tools, marking tools, and evidence tags or logs.

COMPETENCE:

- Collect evidence sample at scene.
- Identify evidence on log sheet.
- Document and maintain security of evidence.
- Document each time evidence changes custody.
- Maintain evidence log as part of incident related documentation.

TIME: 10:00 Minutes

**17. Dispose of evidence so that the disposal is timely, safely conducted, and in compliance with jurisdictional or agency requirements.**

REFERENCE: NFPA 1033, 2014 Edition, 4.4.5  
NFPA 921, 2014, Chapters 17.11

CONDITION: Given jurisdictional regulations and file information.

COMPETENCE:

- Receive proper authorization and documentation to dispose of evidence.
- Return evidence to rightful owner as applicable.
- Dispose of evidence as directed by agency requirements that are not harmful to the investigator or the environment.
- Document the disposal of the evidence.

TIME: 10:00 Minutes

## **INTERVIEW**

**18. 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.**

REFERENCE: NFPA 1033, 2014 Edition, 4.5.1  
NFPA 921, 2014, Chapters 14.1, 14.4

CONDITION: Given a scenario and person(s) for interviewing.

COMPETENCE:

- Gather pertinent and accurate information.
- Obtain information that corroborates or refutes the investigative data.
- Assist in the determination of the fire origin, cause and affixing responsibility.
- Identify who is to be interviewed as part of the investigation.
- Separate parties to be interviewed to different locations.
- Determine location to conduct interviews.

TIME: 30:00 Minutes

**19. Conduct interviews 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.**

REFERENCE: NFPA 1033, 2014 Edition, 4.5.2  
NFPA 921, 2014, Chapters 14.1, 14.4

CONDITION: Given a scenario, and incident information.

COMPETENCE:

- Investigator introduces themselves.
- Investigator should positively identify the person being interviewed and document them by: name, SSN, DOB, Address, home and work phone number and a physical description.
- Investigator should document time, date and location of interview.
- Investigator should outline purpose of the interview.
- During interview, investigator should remain calm, professional, positive and focused.
- Investigator should asked "open-ended questions".
- Document all responses to questions, note any discrepancies, note nonverbal indicators, and general impressions of the interviewee.
- Close the interview and allow the interviewee a chance to provide any additional information.

TIME: 30:00 Minutes

**20. Evaluate interview information so that all interview data is individually analyzed and correlated with all other interviews, corroborative and conflictive information is documented, and new leads are discovered.**

REFERENCE: NFPA 1033, 2014 Edition, 4.5.3  
NFPA 921, 2014, Chapter 12

CONDITION: Given a scenario, interview transcripts or notes and incident data.

COMPETENCE:

- Organize and analyze all information collected.
- Identify any gaps in the investigative data.
- Based on interview, identify any other persons to be interviewed.
- Based on interview, analyze information provided by various individuals interviewed and judge the reliability of information.
- Document analysis of information.

TIME: 30:00 Minutes

## POST-INCIDENT INVESTIGATION

- 21. Gather reports and records 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.**

REFERENCE: NFPA 1033, 2014 Edition, 4.6.1  
NFPA 921, 2014, Chapters 12, 16, 17.9

CONDITION: Given a scenario and appropriate documents.

COMPETENCE:

- Gather all applicable reports, photos, videos, and interviews.
- Ensure and document chain of custody.
- Organize investigation file for reference.

TIME: 20:00 Minutes

- 22. Evaluate the investigative file 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.**

REFERENCE: NFPA 1033, 2014 Edition, 4.6.2  
NFPA 921, 2014, Chapters 12, 17.10, 21, 29

CONDITION: Given a scenario, all available fire information.

COMPETENCE:

- Determine status of case (i.e. active/inactive).
- Identify areas needing further investigation.
- Coordinate with other agencies to determine possible links or similarities.

TIME: 20:00 Minutes

- 23. Coordinate expert resources so that the expert's competencies are matched to the specific investigation needs, financial expenditures are justified, and utilization clearly furthers the investigation toward the goals of causation determination or affixing responsibility.**

REFERENCE: NFPA 1033, 2014 Edition, 4.6.3  
NFPA 921, 2014, Chapters 15.5, 15.6, 29.3, 29.4

CONDITION: Given a scenario, investigative file, reports and documents.

COMPETENCE:

- Identify the need and type of an expert witness.
- Identify potential expert witnesses for investigation.
- Determine experts' qualifications.
- Interview expert to determine ability to support investigation.
- Determine budget to support use of expert witness.

TIME: 20:00 Minutes

**24. Establish evidence as to motive and/or opportunity so that the evidence is supported by documentation and meets the evidentiary requirements of the jurisdiction.**

REFERENCE: NFPA 1033, 2014 Edition, 4.6.4  
NFPA 921, 2014, Chapters 15, 16, 17, 24

CONDITION: Given a scenario.

COMPETENCE: 

- Identify motives for setting incendiary fires.
- Evaluate corresponding documents for suspect motives and or opportunities.

TIME: 20:00 Minutes

**25. Formulate an opinion of the person(s) and/or product(s) responsible for the fire so that the opinion regarding responsibility for a fire is supported by the records, reports, documents, and evidence.**

REFERENCE: NFPA 1033, 2014 Edition, 4.6.5  
NFPA 921, 2014, Chapter 21

CONDITION: Given a scenario and all investigative findings.

COMPETENCE: 

- Review data and test hypothesis against data.
- Formulate and document conclusion of case.

TIME: 10:00 Minutes

## **PRESENTATIONS**

**26. Prepare a written investigation report so that the report accurately reflects the investigative findings, is concise, expresses the investigator's opinion, and meets the needs or requirement for the intended audience(s).**

REFERENCE: NFPA 1033, 2014 Edition, 4.7.1  
NFPA 921, 2014, Chapter 15

CONDITION: Given a scenario, investigative findings, documentation, and a specific audience.

COMPETENCE: 

- Prepare a written report that is:
  - 1- Concise with correct grammar and spelling.
  - 2- Reflects the investigative process.
  - 3- Reflects the investigator findings.
- Report written for intended audience.

TIME: 30:00 Minutes

**27. Express investigative findings verbally so that the information is accurate, the presentation is completed within the allotted time, and the presentation includes only need to know information for the intended audience.**

REFERENCE: NFPA 1033, 2014 Edition, 4.7.2  
NFPA 921, 2014, Chapters 11.4, 11.5

CONDITION: Given a scenario, investigative findings, notes, a time allotment and a specific audience.

COMPETENCE:

- Verbally communicate report to intended audience.
- Focus on facts and relevant information.
- Complete in allotted time.

TIME: 10:00 Minutes

**28. Testify during legal proceedings so that all pertinent investigative information and evidence is presented clearly and accurately, and the investigator's demeanor and attire are appropriate to the proceedings.**

REFERENCE: NFPA 1033, 2014 Edition, 4.7.3  
NFPA 921, 2014, Chapter 11, Annex 11.5.1

CONDITION: Given a scenario, investigative findings, contents of reports, and consultation with legal counsel.

COMPETENCE:

- Identify different types of legal proceedings.
- Review case file prior to testimony.
- Arrive on time to proceeding.
- Dress appropriately.
- Communicate in professional, concise, and accurate manner.
- Respond to questions with pertinent information as it relates to the case.

TIME: 10:00 Minutes

**APPENDIX - A**  
**TRAINING RECORD**

**UTAH FIRE SERVICE CERTIFICATION SYSTEM  
FIRE INVESTIGATOR**

*NFPA 1033, 2014 Edition*

**INVESTIGATOR  
TRAINING RECORD / IN-HOUSE COMPREHENSIVE EXAM**

**NAME:** \_\_\_\_\_ **DEPARTMENT:** \_\_\_\_\_

SECTION	TRAINING RECORD		IN-HOUSE COMP. EXAM			MANIPULATIVE SKILL DEMONSTRATE
	DATE	INST	DATE	INST	PASS	
<b>SCENE EXAMINATION</b>						1. Demonstrate securing a fire ground/scene.
						2. Conduct an exterior survey.
						3. Conduct an interior survey.
						4. Interpret burn patterns.
						5. Correlate burn patterns.
						6. Examine and remove fire debris.
						7. Reconstruct the area of origin.
						8. Inspect the performance of building systems.
						9. Discriminate the effects of explosions from other types of damage.
<b>DOCUMENT THE SCENE</b>						10. Diagram the scene.
						11. Photographically document the scene.
						12. Construct investigative notes.
<b>EVIDENCE COLLECTION</b>						13. Utilize proper procedures for managing victims and fatalities.
						14. Locate, collect, and package evidence.
						15. Select appropriate evidence for analysis.
						16. Maintain a chain of custody.
						17. Dispose of evidence.

SECTION	TRAINING RECORD		IN-HOUSE COMP EXAM			MANIPULATIVE SKILL DEMONSTRATE
<b>INTERVIEW</b>						18. Develop an interview plan.
						19. Conduct interview or interrogations.
						20. Evaluate interview information.
<b>POST - INCIDENT INVESTIGATE</b>						21. Gather reports and records.
						22. Evaluate the investigative file.
						23. Coordinate expert resources.
						24. Establish evidence as to motive and or opportunity.
						25. Formulate an opinion of the person(s) and or product(s) responsible for the fire.
<b>PRESENTATIONS</b>						26. Prepare a written investigation report.
						27. Express investigative findings verbally.
						28. Testify during legal proceedings.

APPENDIX - B  
INVESTIGATION TOOL LIST

## SUGGESTED TOOLS AND EQUIPMENT LIST FOR FIRE INVESTIGATORS

The following is a list of suggested equipment that may be used by a person conducting a fire investigation.

### **Minimum Equipment:**

1 - Personal Protective Equipment (PPE) this may vary due to the condition under which an Investigator may be assessing a scene. At a very minimum the Investigator should use:

- Safety shoes or boots
- Gloves
- Head protection
- Protective clothing such as coveralls or structural PPE.
- Filtered mask or Self Contained Breathing Apparatus (SCBA)
- Eye protection

2 - Camera

3 - Barrier tape, marking cones or other marking devices.

4 - Evidence container: paint cans, paper sacks, etc.

5 - Flashlight or additional lighting, cord reels and a generator as needed.

6 - Shovel, round or square mouth

7 - Broom and various sizes of brushes

8 - Hand tools with carrying case:

- Claw hammer
- Hatchet
- Pry bar
- Hacksaw with extra blades
- Keyhole saw with extra blades
- Screwdrivers of various sizes and types
- Pliers with cutters
- Utility knife with extra blades
- Mason trowel
- Wood chisel
- Cold chisel
- Tape measure
- 6" rules
- Pencil Magnet
- Tire depth-gauge tool
- Pencil scribe
- Marking pens
- Multi-meter (Volt-Ohm)

9 - Other tools or equipment as needed for a specific fire scene such as: ladders, rope, etc.

APPENDIX - C  
IN-HOUSE PROCTOR INSTRUCTIONS

## **Proctor Instructions for “IN-HOUSE” Comprehensive Examination**

As the training officers for your department you are authorized by the Certification Council to conduct the 100% skills test for this level of certification. You must be certified to the level that you are testing, i.e....If you're FF2 you can test both FF1 and 2, Awareness and Operations.

### **\*PRIOR TO CONDUCTING THE TEST, REVIEW TRAINING RECORDS**

It is important that before doing this “IN-HOUSE” exam that the candidate has completed training in all areas for the level being tested.

### **\*SAFETY OFFICER SELECTED AND BRIEFED**

Select a Safety Officer to assist you during the test. This person, if possible, should not be taking the same test that is being given. The Safety Officer will not assist with the testing process. The Safety Officer is there to protect the Candidates from injury during the testing process.

By using the following instructions you will be able to evaluate the skills being tested and determine the candidate's readiness for the State “Spot Check” exam.

1 - Keep in mind that this is a TEST and there should be NO COACHING or TRAINING during the testing process. If a candidate fails to perform a skill, that skill will count as a first attempt failure and they will be given a second attempt. If they fail a second attempt, time they need to be retrained on that skill and tested again. Only **qualified** candidates that have passed with **100%** should be allowed to take the state SPOT CHECK Exam.

2 - Before beginning that testing process conduct a meeting with all candidates and review the testing process. Explain that this is a test and that the same process being used for the “In-House” will be used during the state exam.

3 - If possible, designate two separate areas for students testing. One area for those who are in the testing process and one area for those who have not yet begun the testing process. If separate areas are not available, make sure someone is in the room to ensure that students do not discuss the testing material. Make sure these areas have no training manuals, or other reference materials for students to look at while waiting testing.

4 - To evaluate a candidate's performance use the following as a guide.

- a. The skill is completed in the allotted time,
- b. Competence is shown by completing all performance criteria,
- c. Safety is shown while completing the skill

5 - At each test station the Tester will read the Skill to be demonstrated, the Condition to be met and the Time limit to complete each skill. This information is contained in the skill section of each standards packet. Do this with each student as they come to each testing stations. Ask for any questions. As each skill is tested and completed, sign it off in the section provided on the candidates training record.

By conducting the “In-House” test in the manner, you will prepare your candidates to successfully pass the State “Spot Check” exam. This will also assure that training records are current and that only those who are truly prepared take the Certification Examination.

APPENDIX - D  
CERTIFICATION FORMS

# Utah Fire Service Certification Council



## INTENT TO PARTICIPATE

### Organization Information

**The following organization intends to participate in the Utah Fire Service Certification Program:**

**Department/Organization Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_ **Dept/Org Phone Number:** \_\_\_\_\_

**City:** \_\_\_\_\_ **State:** \_\_\_\_\_ **Zip Code:** \_\_\_\_\_

**The Following Individual will be coordinating department/organization certification/training:**

**Name:** \_\_\_\_\_ **Email:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City:** \_\_\_\_\_ **State:** \_\_\_\_\_ **Zip Code:** \_\_\_\_\_

**Daytime Phone #:** \_\_\_\_\_ **Evening Phone #:** \_\_\_\_\_

**Alternate Contact:** \_\_\_\_\_ **Email:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City:** \_\_\_\_\_ **State:** \_\_\_\_\_ **Zip Code:** \_\_\_\_\_

**Daytime Phone #:** \_\_\_\_\_ **Evening Phone #:** \_\_\_\_\_

### Chief/Administrator Signature

**Chief/Administrator Signature:** \_\_\_\_\_

**Daytime Phone #:** \_\_\_\_\_ **Evening Phone #:** \_\_\_\_\_

Utah Fire Service Certification Council  
C/O Utah Fire and Rescue Academy  
3131 Mike Jense Parkway  
Provo UT 84601  
Fax: 801-371-0681

Certification Office Use Only

## Utah Fire Service Certification Council EXAMINATION REQUEST

Department/Agency Name(s): \_\_\_\_\_ Date: \_\_\_\_\_

Check this box if there is more than one department testing. List each candidate and department on reverse side of form.

Please complete all information on **both** sides/pages of this form and submit it to the certification office **at least 30 days prior to the requested examination date**. A separate request **MUST** be made for each level of certification exam desired and for each exam date.

### EXAM TYPE (Place an "X" in the boxes that apply)

Certification exam level requested: \_\_\_\_\_

**\* Departments who choose not to use an authorized, in-house tester will be required to conduct the written examination two (2) hours before the manipulative examination. If an in-house tester tests their own department's written exams, the written and manipulative exams can be taken on different days.**

<input type="checkbox"/> WRITTEN	<input type="checkbox"/> 1 <sup>ST</sup> ATTEMPT	<input type="checkbox"/> 2 <sup>ND</sup> ATTEMPT	<input type="checkbox"/> 3 <sup>RD</sup> ATTEMPT	_____ / _____ Exam Date      Exam Time
				*Please allow 2 hours for each written exam

<input type="checkbox"/> MANIPULATIVE	<input type="checkbox"/> 1 <sup>ST</sup> ATTEMPT	<input type="checkbox"/> 2 <sup>ND</sup> ATTEMPT	<input type="checkbox"/> 3 <sup>RD</sup> ATTEMPT	_____ / _____ Exam Date      Exam Time
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Number of persons taking **WRITTEN** Exam \_\_\_\_\_

Number of persons taking **MANIPULATIVE** Exam \_\_\_\_\_

### EXAM LOCATION

Examination requested to be conducted at (location): \_\_\_\_\_

Street Address: \_\_\_\_\_ City: \_\_\_\_\_ Zip: \_\_\_\_\_

### AUTHORIZATION

By signing below I acknowledge that each candidate is currently affiliated with an agency approved by the UFSCC. I also acknowledge that completed training records exist for each candidate testing. The record states that each candidate testing has received a learning experience in each subject area required for testing and has met all other requirements as specified in the Certification Policy and Procedures. For manipulative (skills) testing to occur, the completed training record(s) **must** be present at the test site.

Department/Agency requesting the above exam will have appropriate space and safe accommodations and equipment for all written and manipulative skills.

Chief or Training Officer Signature \_\_\_\_\_ Contact Daytime Telephone # \_\_\_\_\_

Chief or Training Officer (typed or printed) \_\_\_\_\_ Contact Evening Telephone # \_\_\_\_\_

Department/Agency Mailing Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

### ACCOMMODATIONS

If a candidate needs reasonable accommodations for learning disabilities or other conditions affecting the candidate's ability to complete the written examination, accommodations can be made. Please contact the certification office if accommodations are necessary.





**Utah Fire Service Certification Council**  
**~REQUEST FOR CERTIFICATION / RECERTIFICATION~**

Department/Organization Name

Date

Please type or print names as they should appear on each applicant's card and/or certificate. If this is for recertification, print "RECERT" on the level requested line.

Applicant Name	Social Security # (last four digits)	Date of Birth (mm/dd/yyyy)	Level Requested
1 _____	_____	____/____/____	_____
2 _____	_____	____/____/____	_____
3 _____	_____	____/____/____	_____
4 _____	_____	____/____/____	_____
5 _____	_____	____/____/____	_____
6 _____	_____	____/____/____	_____
7 _____	_____	____/____/____	_____
8 _____	_____	____/____/____	_____
9 _____	_____	____/____/____	_____
10 _____	_____	____/____/____	_____
11 _____	_____	____/____/____	_____
12 _____	_____	____/____/____	_____
13 _____	_____	____/____/____	_____
14 _____	_____	____/____/____	_____
15 _____	_____	____/____/____	_____
16 _____	_____	____/____/____	_____
17 _____	_____	____/____/____	_____
18 _____	_____	____/____/____	_____
19 _____	_____	____/____/____	_____
20 _____	_____	____/____/____	_____