

Advanced Origin & Cause/Courtroom Testimony (Course ID ARSON-CS-0002)

Program Description: This program is designed to enhance the origin and cause investigative skills of the public service fire investigator. The goal of this course is to provide fire investigators with the requisite knowledge, skills and abilities to systematically determine the origin and cause of a fire and to be able to present these findings to a prosecutor and to a jury in all subsequent judicial proceedings. It involves the in-depth study of fire dynamics, fire chemistry, electrical fire causation, burn pattern analysis and fire scene documentation. Instruction will be presented through classroom lectures and practical exercises. The curriculum involves fire scene processing with an emphasis on the practical applications of scientific knowledge. Students are required to process fire scenes utilizing the Scientific Method and “team concept” as well as prepare technical reports documenting their findings for use in court proceedings as an expert witness. A written test is administered at the completion of the course, as well as a final practical exercise, and a mock trial which is designed to prepare the student to testify as an expert witness. In order to cover the amount of material required for this course, completion of work assignments and studying after classroom hours will be necessary. The course is delivered at the ATF Fire Programs & Training Branch located at the National Center for Explosives Training & Research (NCETR) on Redstone Arsenal in Huntsville, Alabama.

Curriculum Includes:

- Fire & Damage Dynamics
- Report Writing
- Scene Documentation
- Electrical Aspects of Fire Scenes
- Appliance Fires
- Fatality Fire Investigations
- Fuel Air Explosions
- NFPA 921 & 1033
- Current Case Law Related to Fire Investigation
- Expert Testimony & Trial Preparation

Prerequisites for Attendance: The course is designed for experienced fire investigators and is highly advanced and technical in nature. Because of the advanced level of this program, student selection is considered vital to the overall effectiveness of the program. To meet minimum background prerequisites, applicants must be full-time public service employees whose current workloads are focused primarily upon fire scene origin and cause determination. A minimum of 5 years of service as a fire investigator is required. In addition to the registration application, all applicants must submit an extensive Curriculum Vitae (CV), which documents their experience in arson investigation, origin and cause determination, and courtroom testimony, if any.

It is also required that students have completed National Fire Academy (NFA) course, *Fire Investigation: Essentials (R0205 or R0206)*, formerly *Fire/Arson Origin-and-Cause Investigation*, as well as the most current required prerequisites for that class*. Several CFITrainer.net modules are required to be completed for application to this class. Supporting documentation, in the form of CFITrainer.net transcript, must be submitted with the application. Access to

CFITrainer.net is via website at www.cfitrainer.net. There are no costs or membership requirements to access these modules. The required CFITrainer.net modules are subject to change based upon the frequent addition of new or updated modules. The list of required CFITrainer.net modules for this class are as follows:

- *Arc Mapping Basics*
- *Basic Electricity*
- *Effective Investigation and Testimony*
- *Electrical Safety*
- *Explosion Dynamics*
- *Fire Protection Systems*
- *Investigating Natural Gas Systems*
- *Managing Complex Fire Scene Investigations*
- *NFPA 921 and 1033 2014 Editions: Important Revisions*
- *NFPA 1033 and Your Career*
- *Postflashover Fires*
- *Process of Elimination*
- *Residential Electrical Systems*
- *Residential Natural Gas Systems*
- *The Deposition Part 1: Format, Content, and Preparation*
- *The Deposition Part 2: Questioning Tactics and Effective Responses*
- *The Impact of Ventilation in Building Structures on Fire Development*
- *The Practical Application of the Relationship between NFPA 1033 and NFPA 921*
- *Thermometry, Heat, and Heat Transfer*
- *Writing the Initial Origin and Cause Report*

Program Costs: Tuition, lodging and per diem costs for this program are covered by ATF. Students and/or their organizations are responsible for travel costs to and from the training facility located in Huntsville, AL. State and Local students will be reimbursed for per diem by direct deposit, following submission of a travel voucher at the conclusion of the training program. Daily per diem rates are determined by GSA. Hotel lodging costs will be direct billed to ATF.

Length of Training: This an intense course of study consisting of a two-week period with ten (10) days of classroom/range instruction. Fire scene practical will be performed on Friday of the first week with the weekend utilized for report writing. Students should expect to work during the evenings and on weekends.

Application: Download [ATF F 6310.1](#) — State and Local Training Registration Request. Complete all applicable fields of the form and attach CV, copy of NFA R0205/R0206 certificate and CFITrainer.net transcript. Please send the completed application and supporting documentation via email to AOCCT@atf.gov. Applicants will be notified if a complete application packet including the correct supporting documentation is received. Complete application packets will then undergo an evaluation to ensure that applicants meet the specified minimum qualifications. Once approved, applicants will be placed on a waiting list for the next available course with selections made as openings become available. Those selected will be contacted with available course dates.

Contact: AOCCT Program Manager Devin Palmer at devin.palmer@atf.gov or 256-261-7537 for additional information.

* - As part of the prerequisites for R0205/R0206 you should have already completed the following CFITrainer.net modules: *The Scientific Method for Fire/Explosion Investigations; Introduction to Evidence; Documenting the Event; Physical Evidence at the Fire Scene; Investigating Motor Vehicle Fires; Introduction to Fire Dynamics and Modeling; Investigating Fatal Fires; Fundamentals of Residential Building Construction; Fire Investigator Scene Safety; and Search and Seizure.*