

Registration for February 20-22, 2018 Program Now Open!

Registration for the Advanced Principles of Fire Dynamics Program scheduled for February 20—22, 2018 hosted by Aurora Fire Rescue and IRIS Fire Investigations is available on the Gulf Coast FIRE website and payments can be made through PayPal. Registration is limited to the first 30 students!

Program Cost: \$895.00 USD

*includes tuition fees, handouts,
experiment book and experiment supplies,
and breaks*



Course Instructors

The primary course instructor is Dr. James G Quintiere, Professor Emeritus of Fire Protection Engineering, University of Maryland at College Park. He has forty years experience in research, teaching and investigation, including twenty years with the fire program at NIST and twenty years at Maryland. He is the author of two books and co-author of one in fire dynamics. He has extensive experience teaching fire dynamics to investigators and engineers untrained in the field. His book *Principles of Fire Behavior*, 2nd Edition is the primary source used to develop this program.

Robert J. Schaal, IAAI-CFI will serve as course coordinator and facilitate practical exercises and course experiments. He is a forensic investigator with Gulf Coast FIRE. He retired as an Assistant Special Agent in Charge with the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) after a 27 year career and was certified as a Special Agent/Certified Fire Investigator. He has coordinated and instructed numerous training programs inside the United States and Internationally. He holds a Bachelor of Science Degree in Criminal Justice from Auburn University, Auburn, Alabama.

**A Training, Education, and Professional
Development Partnership with:**



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Advanced Principles of Fire Dynamics



February 20-22, 2018

Aurora, CO

Advanced Principles of Fire Dynamics

Gulf Coast Fire Investigation, Research, and Education, LLC, in partnership with Dr. James G. Quintiere of Q dot LLC, IRIS Fire Investigations, and Aurora Fire Rescue is happy to announce the scheduled delivery of our Advanced Principles of Fire Dynamics residential training program. The curriculum was developed utilizing a tiered learning approach with the objective of taking students from a knowledge and understanding level of fire dynamics through the comprehension and application level of fire dynamics. This program includes presentations and experiments on the following topics:

Science of Math/General Algebra

Heat Transfer

Combustion

Fire Growth

Fire Plumes

Enclosure Dynamics

WHO SHOULD TAKE THIS COURSE:

Fire investigators wanting to add to or expand their knowledge of fire dynamic concepts & calculations.

Engineers wanting need new knowledge in the theory of fire behavior.

Fire Fighters wanting a better understand of fire behavior for use in investigation and suppression.

Students who are studying fire science, fire protection engineering or forensic fire investigation and who want to better understand the behavior of fire in the real world atmosphere.

Curriculum/Schedule

This program will be hosted at the City of Aurora Public Safety Training Center located at 25950 E. Quincy Avenue, Aurora, CO and is an intensive, interactive twenty-four hour training program delivered over three days. The program combines lectures with bench scale experiments to illustrate and reinforce the concepts and theories presented during the program. The experiments will be conducted in a small group format and group results will be summarized and discussed at the end of each session. The program outline includes:

Day 1 (8 am — 5 pm)

Introduction—introduction to the focus and performance objectives of the program

Science of Math/Basic Algebra for the Fire Investigator—this session focuses on the relationship of math to fire investigation and discusses basic algebra and units

Heat Transfer—this session will discuss the concepts and definitions of energy and heat transfer as it relates to fire development

Heat Transfer Field Experiments

Day 2 (8 am — 5 pm)

Combustion—this session will discuss the various processes of combustion and the process of flame formation

Combustion Field Experiments

Fire Growth—this session will focus on the concepts of heat release rate, ignition, and surface flame spread

Fire Growth Experiments

Day 3 (8 am — 5 pm)

Fire Plumes—this session discusses the dynamics of fire plumes and plume behavior in the fire environment

Fire Plume Field Experiments

Enclosure Dynamics—this session focuses on the dynamics of fire behavior in an enclosure including fire development, flashover, ventilation flows, and the influence of smoke movement.

Enclosure Field Experiments

This program is a tested program and includes a summative evaluation.

NOTE: This program does include a discussion and use of various fire dynamics mathematical equations and concepts. It is recommended that participants bring a scientific calculator or have an appropriate application on their computer or smartphone

Lodging recommendations and other course information available on the Gulf Coast website:

www.gcfireinvestigation.com

Gulf Coast FIRE is an approved provider of Continuing Professional Education through the Louisiana Professional Engineering and Land Surveying Board, Certificate Number 342