

**Registration for  
October 9-13, 2017  
Program Offering Now  
Open!**

Registration for the Electrical Surveying and Arc Mapping for the Forensic Fire Investigator scheduled for October 9-13, 2017 hosted by MSD Engineering at their Crystal Lake, IL laboratory is available on the Gulf Coast FIRE website and payments can be made through PayPal. Registration is limited to the first 20 students!

**Program Cost: \$2000 USD**

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



*Please contact us if you have questions:*

**Gulf Coast FIRE  
Mandeville, Louisiana**

*Email —*

***training@gcfireinvestigation.com***

***(504) 329-0438 (Cell)***

***http://www.gcfireinvestigation.com***

**Curriculum Expert Staff**

This program will be presented in a modular format by an expert staff of licensed professional engineers and certified fire investigators who actively practice in the forensic fire investigation industry. The course will include lecture and hands-on demonstrations and group practical exercises. The staff has experience in the forensic investigation and analysis of fire origin and cause determination, specifically including the survey and analysis of electrical systems and componentry to assist in defining the area of origin and analyzing systems for cause or contribution to fire events.

Program Staff Includes:

Mark Svare, PE, Int. P.E., MSD Engineering, Master Electrician and Professional Electrical Engineer, Minneapolis, MN

Jason McPherson, PE, Int. P.E., MSD Engineering, Master Electrician and Professional Electrical Engineer, Grand Rapids, MI

Matt Dubbin, PE, Int. P.E., MSD Engineering, Professional Electrical Engineer, Minneapolis, MN

Dr. Nick Carey, IAAI-CFI, GFireE, FSSocDIP, Guild Registered Electrician (US Master Electrician Equivalent) Hawkins and Associates, Ltd., London, United Kingdom

Robert Schaal, IAAI-CFI, Gulf Coast Fire Investigation, Research, and Education, Mandeville, LA

Jeffery Washinger, IAAI-CFI, Investigations and Loss Control Services, Inc., Apple Valley, MN

Instructor Biographical Information is available through the Gulf Coast FIRE website: **[www.gcfireinvestigation.com](http://www.gcfireinvestigation.com)**

**A PROFESSIONAL DEVELOPMENT PARTNERSHIP**



**ILC**



**Presents:**

**Electrical Surveying and  
Arc Mapping for the  
Forensic  
Fire Investigator**

**October 9-13, 2017**

**Crystal Lake, IL**

## ***Electrical Surveying and Arc Fault Mapping for the Forensic Fire Investigator***

Mark Svare, PE and MSD Engineering, in partnership with Robert Schaal, IAAI-CFI of Gulf Coast FIRE, LLC and Jeffery Washinger, IAAI-CFI of Investigative and Loss Control Services, Inc., are happy to announce the scheduled delivery of our Electrical Surveying and Arc Mapping for the Forensic Fire Investigator program. The curriculum was developed utilizing a tiered learning approach with the objective of taking students from a knowledge and understanding level of electricity and electrical systems as they apply to the residential environment through the comprehension and application level necessary for use in fire scene evaluation. This program includes presentations and practical exercises on the following topics:

**Fundamentals of Electricity**

**Power Distribution Systems**

**Residential Wiring Systems**

**Electrical Protection Devices**

**Electrical Safety**

**Electrical Surveying with Arc Mapping**

### **WHO SHOULD TAKE THIS COURSE:**

**Fire investigators** wanting to add to or expand their knowledge of electricity and electrical systems and expand their abilities to apply this knowledge in the forensic environment.

**Engineers** wanting to expand their abilities and understanding of electricity and electrical systems and apply this knowledge in the forensic arena.

**Students** who are studying fire science, fire protection engineering, electrical engineering, or forensic fire investigation and who want to better understand electricality and electrical systems and the forensic evaluation of these systems.

## ***Curriculum/Schedule***

This program is an intensive, interactive forty hour training program delivered over five days that combines lectures with demonstrations and group exercises to illustrate and reinforce the concepts and theories presented during the program. The exercises 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 presentations and discussions on the following topics:

**Fundamentals of Fire Investigation**—a discussion of the application of NFPA 921 and 1033 to the electrical aspects of fire investigation.

**Advanced Electrical Construction and Distribution Systems for the Fire Investigator**—including an overview of terminology and residential distribution systems.

**Overview of National Electrical Code (NFPA 70) as it relates to the Fire Investigator**

**Panel Construction Practical Exercise**—including wire installation through various branch circuits and electrical devices.

**Electrical Surveys and Arc Mapping** – overview of the principles and practices of evaluating, inspecting and documenting electrical systems during forensic fire investigations.

**Case Studies/Case Histories** demonstrating the practical application of electrical surveying and arc mapping in forensic fire investigations.

**Electrical Survey and Arc Mapping Practical Exercise**—practical demonstration of the skills and competencies of arc mapping analysis in forensic fire investigation.

**Each student will receive a copy of lecture note material, 2017 NFPA 921, 2014 NFPA 1033, and 2017 Ugly's Electrical Reference book.**

**This course will include a multi-pronged final examination consisting of a practical exercise and a written examination. All components must be mastered in order to receive a course certificate.**

**NOTE:** This program does include a discussion and use of various electrical 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 will be made available on the Gulf Coast website:**

**[www.gcfireinvestigation.com](http://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**

**40 Professional Development Hour Equivalent**