



**Alarm Science Basics**  
**Course Time: 4 Hours**

**Course Description**

Alarm Science, at its core, is helping to scientifically and technically ensure that electronic security and life safety systems will operate as intended, and most importantly, when needed in an emergency. Alarm Science further helps ensure the appropriate notification of the subscriber and the local authorities of an emergency.

The material in this course is viewed from a security, life safety, and legal perspective. The same principles and best practices that may help protect your subscribers from serious personal injury and loss of life and property damage may also help minimize your legal liability. Alarm contractors, installers, and the central station industry can benefit from applying alarm science in its business operations.

This course is presented in partnership with Jeffrey D. Zwirn, CPP, CFPS, CFE, SET, FASI&T, CHPA-IV, MBAT, President of IDS Research and Development, Incorporated, with over 40 years of specialized expertise in the alarm and security industry. Mr. Zwirn has been involved in the security survey, need analysis, system recommendations, sales, design, installation, programming, testing, inspection, service, maintenance, and monitoring of more than five thousand (5,000) security and life safety systems for residential, commercial, industrial, and governmental applications. Mr. Zwirn literally wrote the book on Alarm Science and is the preeminent forensic alarm system evaluation expert.

**Course Outline**

- Introduction
- Objectives
- What is Alarm Science?
- Protecting Lives and Your Livelihood
- The 25 Principles of Alarm Science
- Manufacturer's Specifications
- NFPA Standards
- UL Standards
- How Equipment Becomes UL Listed
- UL Listed Equipment
- NFPA Requirements
- UL Listed Companies
- Benefits of UL Certification
- UL Certified Systems and Insurance
- UL Inspections
- System Non-Compliance
- Additional System Inspections
- Revocation of UL Listing
- UL Certified Maintenance Requirements
- Nationally Recognized Industry Standards and Best Practices
- Why You Should Care about Alarm Science
- Duties of an Alarm Contractor
- Liability – Controllable and Uncontrollable Factors
- Bad Installations are No Laughing Matter
- Consequences of your Actions and Inactions
- Proper Training, Methodology, and Supervision of Employees and Subcontractors
- System Supervision
- But For or So What Theories
- Doing the Job Right, or Not Doing It At All
- Do You Have the Science to Support Your Methodology
- Be Prepared to Defend Your Decisions
- Legal Claims
- Follow the Principles and Document
- Minimizing Liability
- Understanding the Application
- Educate the Customer
- Properly Document When a Subscriber Declines a Recommended Method of Protection
- Document/Note Why You Chose to Recommend/Not Recommend a Particular Technology
- One-Way v. Two-Way Wireless Radio Alarm Transmitters
- Document Subscribers' Requests on Central Station Notifications and Provide Appropriate Warnings
- Document All Testing, Defects, Irregularities and What, If Anything, Else Needs to be Done
- Existing Systems and Methodologies
- Equipment which is Installed Beyond its Functional and Reliable Life Expectancy
- Technicians and Alarm Installers

- Summary
- Conclusion