



RON SMITH & ASSOCIATES, INC.



Scientific Analysis: From the Laboratory to the Witness Stand

Course Description

This is the class which the forensic identification community has been pleading for a long time and one which should become mandatory training for any pattern evidence examiners who are expected to provide expert witness testimony in today's ever changing environment. It combines training in scientific analysis with the skill sets necessary to articulate your opinion while on the witness stand as an expert witness.

We all know that proper application and articulation of scientific principles to forensic evidence is a basic requirement of the modern day forensic practitioner. This five day course will explore and explain basic scientific principles as they pertain to pattern evidence comparisons, conclusions and testimony. Although the primary forensic discipline addressed will be friction ridge analysis, the majority of the instruction will be equally relevant to other pattern evidence disciplines. Practical exercises are designed to show the benefits of questioning information over accepting information as a means of improvement. For an expert witness to be able to convey the scientific reasoning behind their conclusion requires that they fully understand it themselves. Opinions without justification no longer meet the needs of the court and this course is designed to bridge the gap between what has been common practice in the past and what is now required in the post-Daubert environment. This is not a basic courtroom testimony class but should be considered required training for anyone who will be asked to offer scientific opinion testimony as an expert witness.

Target Audience

This course is designed for all pattern evidence practitioners, especially friction ridge examiners, regardless of their level of experience. More experienced examiners will be able to learn an improved method of conveying their opinions from a more scientific perspective, while less experienced examiners will be able to develop a method of examination and testimony which will withstand the current and future challenges of our legal system as they develop. The student will be able to not only better understand the scientific principles of their forensic discipline, but they will be able to articulate those principles while offering their opinion testimony as an expert witness.

Course Objectives

The objective of this course is to provide each participant with an increased understanding of scientific principles and how to apply those principles to the examination process. Understanding this information will simplify testimony because science provides the answers to the most difficult questions (How much is enough? How do you diminish bias? When is blind verification valuable? How much documentation is needed?).

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Class instructor:
Michele Triplett,
CLPE



Course Logistics

When:

November 3-7, 2025

Class Times:

08:00 AM - 05:00 PM

Where:

Loudoun County Sheriff's Office
803 Sycolin Road SE
Leesburg, VA 20175

Tuition:

\$650.00

***This course approved for
I.A.I. Certification & Re-certification***

Local Contact

Abigail Reade

Biometric Examiner

Loudoun County Sheriff's Office
(703) 737-8925

Abigail.Reade@Loudoun.gov

Course Objectives (cont.)

Scientific principles have been refined throughout the centuries to aid in arriving at the strongest possible conclusions. After completing this course students will understand the advantages of using scientific principles over personal judgments. Students will be able to arrive at and present conclusions that are based on observable data that withstand the scrutiny of others. Students will be able to provide solid, supportable conclusions without overstating results. Upon successful completion of this course, the student will be able to:

- Understand scientific protocols for different types of sciences (pure, exact, hard, applied, etc.)
- Understand and apply scientific protocols during the comparison and verification process
- Understand and utilize scientific terminology correctly (theory, valid, proof, possible, plausible, objective, etc.)
- Testify within the requirements of science
- Testify within the legal requirements for expert witnesses
- Testify accurately without overstating conclusions
- Understand the value of questioning ideas as a means of improving and strengthening conclusions

Daily Schedule

	DAY 1	DAY 2	S	DAY 4	DAY 5
HOURL 1	- Registration - Course Overview - Introductions	Review	- Admissibility Criteria - Significant Cases - NAS	Review	Attorney Tactics
HOURL 2	- What is science? - Different types of science	Scrutiny	- Critics - Objectivity - Subjectivity - Bias	- Expert - Role of the Expert	Exhibits
HOURL 3	- History - Goals - Exercise: Basic Protocols of Science	Practical Exercises: Scrutiny	Practical Exercise: Documentation/Possible Conclusions	Non-Verbal Communication	Terminology
HOURL 4	- Methods - Laws - Theories		Practical Exercise: Errors	Verbal Communication	Qualifying Questions
LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
HOURL 5	Support behind methods, laws, and theories	Blind Verification	- Statistics - Organizations	Pre-trial	- Basic Questions - Challenging Questions
HOURL 6	ACE-V	Practical Exercises: Comparisons	- Easy Attacks - Research Studies	Court Rules	Preparing for a Motion to Exclude
HOURL 7	Practical Exercise: Specific Protocols		Practical Exercise: QA Measures / Diminishing Bias	- Cases Excluding Evidence - Limiting Testimony - Overturned Cases	Practical Exercise: Difficult Testimony Questions
HOURL 8	Sources for Protocols			Review	- Questions - Test - Certificates

Class Level

Basic, Intermediate and Advanced

Class Format

Lecture, Discussion, Practical Exercises (written and verbal), Tests (written and verbal)

Pratical Exercises and Tests

Group activities are designed to develop and strengthen critical thinking and reasoning skills. Comparison exercises are designed to challenge previous held or personal beliefs in favor of supportable conclusions. The ability to explain scientific concepts will be tested verbally as preparation for testimony. A final examine will test the understanding of scientific concepts as they pertain to friction ridge examination.

Helpful Lodging Information

Although we cannot endorse any particular hotel property, we have confirmed that the following lodging is within a reasonable commuting distance to the training site.

Home2 Suites by Hilton Leesburg
420 Fort Evans Rd NE
Leesburg, VA 20176
(571) 209-1010

[Please click here for reservations](#)

Tru by Hilton Ashburn One Loudoun
44732 Endicott Drive
Ashburn, VA 20147
571-639-3060

[Please click here for reservations](#)

Online Class Registration

Visit us at: www.RonSmithandAssociates.com to reserve your seat.

About RS&A Training Services

For over twenty years, Ron Smith, and now Ron Smith & Associates, Inc. has provided high quality forensic training courses throughout the United States and around the world. By building a team of internationally regarded instructors to work hand in hand with our full time Training Division support staff, RS&A has developed a delivery system second to none in the industry. Over 25,000 students have received training from RS&A and that number grows significantly every year. This training has been brought to forensic specialists in all fifty states and continues to be the primary resource for forensic training in North America.

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