



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:

June 22-26, 2026

Class Times:

08:00 AM - 05:00 PM

Where:

NOVARIS
4890 Alliance Drive
Fairfax, VA 22030

Local Contact

Abigail Reade
Biometric Examiner
Loudoun County Sheriff's Office
(703) 737-8925
Abigail.Reade@Loudoun.gov

Tuition:

\$650.00

Training Site Representative:
William Vosburg
NOVARIS - System Manager
571-731-5390
William.Vosburg@fairfaxcounty.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 |
|--------|--|-------------------------------------|--|---|--|
| HOUR 1 | - Registration - Course Overview - Introductions | Review | - Admissibility Criteria - Significant Cases - NAS | Review | Attorney Tactics |
| HOUR 2 | - What is science? - Different types of science | Scrutiny | - Critics - Objectivity - Subjectivity - Bias | - Expert - Role of the Expert | Exhibits |
| HOUR 3 | - History - Goals - Exercise: Basic Protocols of Science | Practical Exercises: Scrutiny | Practical Exercise: Documentation/Possible Conclusions | Non-Verbal Communication | Terminology |
| HOUR 4 | - Methods - Laws - Theories | | Practical Exercise: Errors | Verbal Communication | Qualifying Questions |
| LUNCH | LUNCH | LUNCH | LUNCH | LUNCH | LUNCH |
| HOUR 5 | Support behind methods, laws, and theories | Blind Verification | - Statistics - Organizations | Pre-trial | - Basic Questions - Challenging Questions |
| HOUR 6 | ACE-V | Practical Exercises: Comparisons | - Easy Attacks - Research Studies | Court Rules | Preparing for a Motion to Exclude |
| HOUR 7 | Practical Exercise: Specific Protocols | | Practical Exercise: QA Measures / Diminishing Bias | - Cases Excluding Evidence - Limiting Testimony - Overturned Cases | Practical Exercise: Difficult Testimony Questions |
| HOUR 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)

Practical 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.

Hilton Fairfax
12777 Fair Lakes Circle
Fairfax, VA 22033
(703) 653-6000

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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