



RON SMITH & ASSOCIATES, INC.



Understanding Exclusion and Sufficiency Decisions

Course Description

This 32-hour intermediate/advanced level course explores in depth and breadth the two concepts of “sufficiency” and “exclusion”. Examiners routinely struggle with these concepts and this course offers both theoretical and practical learning tools to better understand these concepts. The course will explore sufficiency for “value” determinations, as well as “sufficiency for conclusions”. The instructors will utilize current SWGFAST standards and ISO requirements when providing guidance on these topics. Students will explore several approaches for reducing erroneous exclusion rates and guidance is provided in the course for best practices based on the current research and literature available.

Target Audience

This course, the first of its kind in the friction ridge community, deals with the critical concepts of exclusion and sufficiency and will benefit examiners at all levels of experience and skill. However, to fully appreciate and grasp the complexity of the issues surrounding these difficult decisions – made by examiners every day – comparison experience is not only preferred but strongly recommended. Unit supervisors and quality managers are also encouraged to attend this course to gain a better understanding of the complexity of the current state of friction ridge examination.

Course Objectives

After attending this course the student will:

- Understand how thresholds and strategies affect decision making.
- Understand how utility function plays a role in decision making.
- Understand the different approaches to determination “of value”.
- Understand how agency policy will shape examiners’ approaches to sufficiency.
- Understand how knowledge, ability, and experience can impact sufficiency decisions.
- Understand how Bayes theory and utility function impact sufficiency decisions.
- Understand how sufficiency is expressed in other (non-forensic) domains.
- Understand what the “One Discrepancy Rule” is and its role (if any) in exclusion decisions.
- Understand the different ways in which an “exclusion” decision can be expressed.
- Understand how error rates apply to conclusions.
- Recognize the different ways that exclusions are conducted.
- Understand methods and approaches to reduce erroneous exclusions

Class Instructors:



John Black,
CLPE, CFWE, CSCSA



Glenn Langenburg,
Ph.D., CLPE, F-ABC

Course Logistics

When:

March 6 - 9, 2023

Class Times:

08:00 AM - 05:00 PM

Where:

Calgary Police Service Headquarters
5111 47 St NE
Calgary, AB T3J 3R2
Canada

Tuition:

\$650.00

This course approved by the I.A.I. Latent Print Certification Board for 32 Hours of Certification & Re-certification training credits.

Local Contact

Jackie Boyd
Forensic Identification Specialist
Calgary Police Service
403-801-4261
pol11410@calgarypolice.ca

Daily Schedule

| | DAY 1 | DAY 2 | DAY 3 | DAY 4 |
|--------|--|---|-----------------------------------|---|
| HOOR 1 | - Registration - Introductions - Pre-Course Survey | Accessing Quality, L3D, and Other Features | Understanding Exclusion Decisions | Exercise 6 Coupled with Error Rates |
| HOOR 2 | Threshold vs. Strategy | Exercise 3: Using all levels, creases, ect. | | Exercise 5: Exclusions and Tolerance |
| HOOR 3 | Exercise 1: Timed Comparisons | | SWGFAST Standards | |
| HOOR 4 | | | | |
| LUNCH | LUNCH | LUNCH | LUNCH | LUNCH |
| HOOR 5 | Different Approaches to Sufficiency (Exercise, 2A) | Exercise 4: Sufficiency Graph Placement | Exercise 6: Searching to Exclude | Research: Using AFIS as a tool to reduce erroneous exclusions |
| HOOR 6 | Exercise 2B: Reassessment of Value | Policy Devisons, Science, and Other Domains | | Case Examples: Erroneous Exclusions |
| HOOR 7 | Exercise 2C: Approaches #1 and #2 | Bayesian Approach to Sufficiency | Computing Error Rates | Applying What You Have Learned to Practical Examples |
| HOOR 8 | | | | |

Must Bring to Class

- Students should bring fingerprint magnifiers and ridge counters.
- Please bring a calculator (smart phone or tablet calculator will be sufficient).
- Dress is business casual as the course will be conducted in a professional environment and facility.

Recommended Reading

Black J. Is There a Need for 100% Verification (Review) of Latent Print Examination Conclusions? *Journal of Forensic Identification* (2012), 62 (1), 80 – 100.

Neumann, C., Champod, C., Yoo, M., Genessay, T., and Langenburg, G. Improving the Understanding and the Reliability of the Concept of "Sufficiency" in Friction Ridge Examination. *U.S. Department of Justice, Washington, D.C. July 2013* (2013).

Ray, E. and Dechant, P.J. Sufficiency and Standards for Exclusion Decisions. *Journal of Forensic Identification* (2013), 63 (6), 675-697.

Scientific Working Group on Friction Ridge Analysis Study and Technology (SWGFAST). Document #8 Standard for the Documentation of Analysis, Comparison, Evaluation, and Verification (ACE-V) (Latent). 09/11/12, ver 2.0 <http://www.swgfast.org/Documents.html>, [last accessed: July 30, 2013].

Scientific Working Group on Friction Ridge Analysis Study and Technology (SWGFAST). Document #10 Standards for Examining Friction Ridge Impressions and Resulting Conclusions. 04/27/13 ver. 2.0 <http://www.swgfast.org/Documents.html>, [last accessed: June 10, 2013].

Scientific Working Group on Friction Ridge Analysis Study and Technology (SWGFAST). Document #15 Standard for the Definition and Measurement of Rates of Errors and Non-Consensus Decisions in Friction Ridge Examination. ver 2.0 [last accessed: last accessed 10/09/2013].

Ulery, B.T., Hicklin, R.A., Buscaglia, J., and Roberts, M.A. Accuracy and reliability of forensic latent fingerprint decisions. *Proceedings of the National Academy of Sciences* (2011), 108 (19), 7733-7738.

Ulery, B.T., Hicklin, R.A., Buscaglia, J., and Roberts, M.A. Repeatability and reproducibility of decisions by latent fingerprint examiners. *PLoS One* (2012), 7 (3), e32800.

Ulery, B.T., Hicklin, R.A., Kiebusinski, G.I., Roberts, M.A., and Buscaglia, J. Understanding the sufficiency of information for latent fingerprint value determinations. *Forensic Sci Int* (2013), 230 (1-3), 99-106.

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.

Hampton Inn and Suites Calgary-Airport
2420 37 Ave NE Calgary, AB T2E 8S6
Canada
+1 403-250-4667

[Click here for reservations](#)

Residence Inn by Marriott Calgary-Airport
2530 48 Ave NE Calgary, AB T3J 4V8
Canada
+1 403-278-1000

[Click here for reservations](#)

Special parking notes
Park in parking lot at front of building and enter through main doors.

Pass can be obtained from Commissionaire.

Online Class Registration

Visit us at: www.RonSmithandAssociates.com and register today!