



Relationship Testing Statistical Calculation Training

Module 2 Syllabus



AABB Relationship Testing Statistical Calculation Training

Module 2: Non-Parentage Kinship Calculations

Syllabus

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Technical Requirements and Contact Information for Assistance

This program is offered entirely online as independent, self-paced study through AABB's Education Platform located at <http://education.aabb.org>.

Technical Requirements - learners must:

- Have an internet connection to access the course.
- Navigate and be able to use the features of the course content and Education Platform.

The course can be viewed on a mobile device; however, a desktop or laptop computer is recommended. AABB recommends registered learners use Google Chrome, Safari, Microsoft Edge, or Firefox browsers to access the program. Anyone using MAC or PC can [download Google Chrome](#). Internet Explorer is not supported.

For questions related to the program submit an enquiry via email to the AABB eLearning team at eLearning@aabb.org. A response should be expected Monday – Friday during business hours (US Eastern Standard Time or EST) within 72 hours of request.

Course Description

This unique program seeks to educate laboratory scientists and forensic analysts on the statistical methods used to determine non-parentage familial relationships.

Featuring self-paced, multi-media online training and practice exercises, this course includes four (4) units:

- Unit 1: Introduction to Kinship Analysis: Calculation of the Kinship Index for Full Sibling Pairs
- Unit 2: Second Degree Two Parties Kinship Testing: Half Siblings, Aunt/Uncle, Nephew/Niece and Grandparent and Grandchild. Reporting Results for Two Party Testing.
- Unit 3: Grandparentage with Two Grandparents and Grandchild with and without the Mother
- Unit 4: Testing with More than Two People in Sibling Relationships (Full and Half Siblings)

Practice exercise worksheets, downloadable MP3 audio files and a handout of each unit are also included within the course.

Course Goals

Upon completion of this course, learners should be able to:

- Discuss the derivation of the kinship index.
- Perform two-party calculations for siblings, half-siblings, avuncular and single grandparentage.
- Write a statement of the estimation of uncertainty for two-party kinship calculations.
- Perform kinship calculations with three or more people.

The course is expected to take approximately 6-8 hours to complete and can be taken asynchronously at the convenience of the learner.

Prerequisites

Learners should have the knowledge and ability to calculate basic parentage relationship statistics involving duos and trios.

Learning Objectives

Each unit builds upon the prior unit and covers elements relevant to developing an overall understanding and foundation of non-parentage kinship calculations.

Unit 1: Introduction to Kinship Analysis: Calculation of the Kinship Index for Full Sibling Pairs

Upon completion of this unit, a learner should be able to:

- Discuss the degrees of biological relationships and the principles used in DNA-based kinship testing.
- Perform two-party calculations to evaluate alleged full sibling relationships.

Presented by: Hristina Lekova, MS

Unit 2: Second Degree Two Parties Kinship Testing: Half siblings, Aunt/Uncle, Nephew/Niece and Grandparent and Grandchild. Reporting Results for Two Party Testing.

Upon completion of this unit, a learner should be able to:

- Describe second degree relationships.
- Perform two-party calculations for half siblings, avuncular and single grandparent.
- Write a statement of the estimation of uncertainty for two-party calculations when reporting results.

Presented by: Hristina Lekova, MS

Unit 3: Grandparentage with Two Grandparents and Grandchild with and without the Mother

Upon completion of this unit, a learner should be able to:

- Reconstruct a missing parent's genotype using his or her parents.
- Perform Grandparentage calculations using both grandparents.
- Discuss the advantages and disadvantages of Grandparentage testing.

Presented by: John Peterson, PhD

Unit 4: Testing with More than Two People in Sibling Relationships (Full and Half Siblings)

Upon completion of this unit, a learner should be able to:

- Describe testing with an acknowledged (undisputed) parent when a sibling relationship is questioned.
- Perform calculations to determine full and half sibling relationships with three or more parties.

Presented by: George Maha, JD, PhD

Activities for Successful Completion of the Course

Read and study all materials for each unit and complete each activity as presented including the practice exercises. Since this is a self-paced program, learners may decide how much time is needed to review and study the materials. Follow the units in order as information builds upon preceding lessons.

This course provides material important in understanding the advanced statistical elements involved in kinship calculations. For successful completion of the course resulting in the conferral of a certificate of completion:

- Watch the video for each unit and complete the practice exercise worksheets provided (handout review only for Unit 4).
- After completing all units, a course quiz is provided. Answer all the quiz questions; scoring 80% or higher (20 out of 25 questions to score 80%). The quiz is a pass/fail exercise where learners will have two (2) opportunities to achieve 80% or higher. There is no grade provided for the quiz; rather an opportunity to reinforce your understanding of the content provided in the course. On the quiz:
 - Learners will receive quiz questions (i.e., multiple choice) and asked to select the correct answer.
 - Learners will receive feedback as to whether an answer choice is correct or incorrect.
- Complete the Non-Parentage Kinship Calculations Post-Program Evaluation. This is your opportunity to share with AABB your experiences and recommendations to further enhance the program.
- Claim continuing education (CE) credit type (CE certificate/Certificate of Completion issued).

Continuing Education Credits

This course is eligible for eight (8) continuing education credits/contact hours for California Nurses, California Lab Personnel, Florida Lab Personnel and General Participation credit. The number and type of credits awarded for this course was determined by the estimated program completion time. This course is not eligible for continuing medical education (CME) credit for physicians. For more information on each credit type please visit the AABB [Continuing Education Credits webpage](#). A continuing education certificate/certificate of completion will be immediately provided to learners upon completing all four units, successful completion of the course quiz, completion of the program evaluation, and claiming your continuing education credit type.

Program Access & Retakes

Access to the program in the AABB Education Platform will be available to you for one (1) year from the date of registration for the course. This program is self-paced; however, learners must complete all units, worksheet exercises, course quiz, program evaluation, and claim continuing education credit type within the year to receive the Continuing Education Certificate/Certificate of Completion.

Learners are provided with two (2) attempts to successfully pass the quiz. If after both attempts the learner does not achieve the minimum score of 80%, the learner will not be able to receive a certificate of completion. AABB provides the opportunity for a retake (2 additional quiz attempts) at a reduced price. Instructions on requesting a retake registration form are provided in the course or the learner can contact eLearning@aabb.org.

Course Faculty & Contributors

This course is brought to you by the AABB Relationship Testing Accreditation Committee. While there are numerous participants that have brought this program to fruition, key faculty include (*titles and affiliations at the time of program development*):

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Course References

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