



## MATH & PHYSICS FOR BLOODSTAIN PATTERN ANALYSTS

“Bloodstain Pattern Analysis is not science.” That is becoming a more commonly held opinion in American courtrooms today. But those uttering these words usually do not understand that Bloodstain Pattern Analysis is based on principles of physics and mathematics. The issue then becomes, how well the analyst can apply these principles on the crime scene and explain them when he or she appears in court. When you do Bloodstain Pattern Analysis, do you really understand these principles or are you just filling-in the blanks in a pre-printed formula?

This course will introduce the student to the mathematical theory behind the formulae used to determine the origin of blood sources and the scientific principles that dictate the motion of blood. Successful completion of this course will enable the student to analyze and interpret bloodstained crime scenes more effectively and will give the student essential tools to become a better expert witness when testifying about Bloodstain Pattern Analysis. Hands-on exercises will be utilized to reinforce principles learned in the classroom and will include instruction in the use of the HemoSpat® computer program for Bloodstain Pattern Analysis.

Prerequisite: Attendance at a 40-hour basic bloodstain pattern analysis course is required for attendance at this course.

### COURSE DETAILS

DATE: Feb. 20 - 24, 2017

TIME: 8:00 AM to 5:00 PM

LOCATION: **San Diego County  
Sheriff's Office  
5255 Mt. Etna Drive  
San Diego, CA 92117**

INSTRUCTORS: Brian Yamashita

TUITION: \$726 per student

### COURSE TOPICS

- Trigonometric formulae commonly used in the analysis of points-of-origin for the blood source.
- Physical properties of blood as they pertain to blood in motion and blood interacting with various surfaces.
- Explain the trigonometric terms: Sine, Arcsine, and Tangent, and their use in the analysis of bloodstain patterns
- Identify the physical properties of matter (Liquid and Solid)
- Explain the terms: Gravity, Viscosity, and Surface Tension and how they affect blood in motion
- Reconstruct bloodstain patterns using “HemoSpat” computer software and explain its use
- Explain all of these formulae, principles, and techniques to the layperson (such as a judge, jury, prosecutor, or defense counsel) as needed in a courtroom setting

To register, visit [tritechtraining.com](http://tritechtraining.com) or contact our Training Director Phil Sanfilippo at 800.438.7884 ext. 7800 or by email at [phil@tritechusa.com](mailto:phil@tritechusa.com).



## LODGING



We have arranged for a block of rooms at the **Courtyard San Diego Central - 8651 Spectrum Center Blvd, San Diego, California 92123**, at the special rate of \$155 per night.

In order to receive this special rate, make your reservation online on the hotel website [HERE](#). For question about booking a room, call **Sales & Events Coordinator Jaimie Lindquist at (858) 633 - 9003** and mention *“Tri-Tech Forensics.”*

This hotel offers free high speed internet, a fitness center, and a heated outdoor pool. Enjoy a Starbucks® coffee on-the-go and dine in the hotel Bistro open for breakfast and dinner. The hotel is near attractions such as the San Diego Zoo, SeaWorld, downtown, and beaches.

## ADA / SPECIAL ACCOMMODATIONS

To ensure that we can accommodate persons with special needs who wish to attend our courses, please be sure to identify the accommodation needed when you register, or if applicable, at the time you register by phone.

To register, visit [tritechtraining.com](http://tritechtraining.com) or contact our Training Director Phil Sanfilippo at 800.438.7884 ext. 7800 or by email at [phil@tritechusa.com](mailto:phil@tritechusa.com).

## ABOUT THE INSTRUCTOR

### Brian Yamashita

Brian Yamashita was born and raised in Winnipeg, Manitoba, Canada. He received a B.Sc. (Hons.) Degree in Chemistry from the University of Manitoba, and a Ph.D. in Physical Chemistry from the University of Western Ontario in London, ON. He was a Killam Postdoctoral Fellow at Dalhousie University, a Chemistry Instructor at the University of Victoria, and a Research Associate with Atomic Energy of Canada before joining the Royal Canadian Mounted Police (RCMP) in 1989. He currently works as a research scientist in Integrated Forensic Identification Services in Ottawa, doing research and development work in forensic science, with an emphasis on forensic identification. He has authored or co-authored over 40 papers in the physical chemistry and forensic science literature and has lectured extensively on chemical development of fingerprints and the use of forensic light sources, the application of the Scientific Method to forensic science, and bloodstain pattern analysis. He is a member of the IAI, IABPA, CIS, CIC, and CSFS. He is on the Editorial Board of the Journal of Forensic Identification, and is the Editor of the Canadian Society of Forensic Science (CSFS) Journal.

## HOW TO REGISTER

[Click here to download the course registration form.](#)

Complete the registration form and then choose from the following registrations methods:

1. Complete this registration form and mail it to:  
TRITECHFORENSICS Training Division  
4019 Executive Park Blvd., SE  
Southport, NC 28461-8026
2. Email the registration form to [phil@tritechusa.com](mailto:phil@tritechusa.com)
3. Fax registration form to (615) 590-7693
4. Contact Phil Sanfilippo at telephone number (800) 438-7884 x7800 to register by phone.

## ABOUT TRITECHFORENSICS

A leader in the forensics market, TRITECHFORENSICS provides evidence collection and crime scene investigation products and training to crime labs and crime scene investigators throughout the world. With over 30 years of experience, we are the nation's most proficient developer and manufacturer of forensic kits. We are committed to providing our customers with state-of-the-art forensics products and services at affordable prices. It is our goal, through our research and development program, to continue to develop superior products and training to aid in all aspects of crime scene investigation and crime lab analysis. We know how important our products and training are to the forensics community, from investigation to prosecution – that is why our slogan, *Identify. Collect. Preserve.*, represents the mission of our customers.