

University of Northern Colorado
College of Humanities and Social Sciences
Office of Extended Studies
CRJ 405-600 Bloodstain Pattern Analysis at Violent Crime Scenes (3 cr)
Summer, 2012

Instructor: Alan Price, MA, SCSA

Adjunct Faculty, University of Northern Colorado

Email: Alan.Price@unco.edu

Phone: 303-710-1547

Invited Guest Lecturers:

- (1) Sgt. Rudy Flores, BS, Texas Ranger, Company B, Palestine, Texas, Court recognized expert in Bloodstain Pattern Analysis.
- (2) Sgt. Jim Huggins, BA, MFS, Texas Ranger (Ret). Court recognized expert in Bloodstain Pattern Analysis.
- (3) Honorable Marcelow Kopcow, Division 11, 19th Judicial District Court Judge

Class Building & Room: Candelaria Hall, Room 1375

Dates and Times: May 7-12, 2012; 8-5 daily

Required Texts: A workshop book and study reference guide will be provided to each student for this course at no additional cost.

Course Description:

This intense one week course will provide the participants knowledge in the recognition of different bloodstain pattern evidence. This will include actual laboratory experimentation of blood flight characteristics of motion and force. These experiments will be augmented with lecture material and case presentations for the purpose of crime scene reconstruction of the sequence of events, location of events and post-crime activities. This course is a combination of lecture and hands-on activities which will allow the participants to work individually and in small groups as they acquire the necessary knowledge and skills required of a bloodstain pattern analyst. The bloodstain evidence that will be analyzed will include that which is present at the crime scene, in a vehicle, on victims and/or subjects clothing, or on discarded evidence such as knives, firearms and other weapons

The blood used in this course is bovine blood so as not to expose attendees to any biohazards.

It is suggested that each student have a calculator that has basic trigonometry functions.

Attendees are welcome to bring cameras to document their work, however, this is not a requirement.

Course Objectives:

1. The participants should acquire a working knowledge of current bloodstain pattern terminology. (Program goals 3, 6, 7).
2. The participants should have a clear understanding of how blood reacts to motion and force. (Programs goals 6, 7)
3. The participants should know how to use proper bloodstain pattern documentation techniques to include sketching, written documentation and photography. Program goals 1, 6, 7)
4. The participants should be able to identify specific bloodstain pattern evidence at crime scenes, in vehicles, on victims/suspects, and on clothing and weapons. (Program goal 6, 7)
5. The participants should acquire the ability to correctly detect, enhance, and preserve serological blood evidence for DNA analysis. (Program goal 6, 7)
6. The participants should be able to use the acquired knowledge and skills in order to correctly interpret bloodstain pattern evidence for the purpose of crime scene reconstruction. (Program goals 6, 7)
7. The participants will acquire the basic knowledge to enable them to be prepared for courtroom presentation of the bloodstain evidence that was collected or documented. (Program goal 1,3,4,5,6,7)

Outline of Course Content:

Historical overview of bloodstain pattern identification
Recommended equipment and supplies for bloodstain kits
Biohazard and safety lecture personal protection matrix
Value of bloodstain analysis at violent crime scenes
Preservation of bloodstain evidence with:
 Photography
 Video
 Notes
 Sketching
 Collection and preservation
Laboratory experiments:
 Diameter of stain vs. distance fallen
 Diameter of stain vs. volume of droplets
 Diameter Stain appearance as a function of the target surface
 Effect of impact angle on stain shape
 Effect of horizontal motion on stain shape
 Effect of stain diameter on drying time
 Splashed bloodstain dispersion
 Dripped bloodstain dispersion
 Cast off bloodstain dispersion
 Projected bloodstain dispersion
 Gunshot blood spatter patterns
 Course and fine spatter patterns
 Contact pattern recognition
 Courtroom testimony preparation
 Crime scene scenario documentation

Class Presentations:

Students will be expected to submit the written results of their group assignments throughout the week. Upon the completion of the course each individual student is expected to submit a crime scene report of their interpretation and analysis of their crime scene and a chain of custody sheet of their evidence. Each student is also required to submit a crime scene sketch that accurately supplements the pattern analysis they have interpreted. Each student will also be expected to participate in a moot court presentation to establish a legal foundation for the introduction of their crime scene sketches and bloodstain pattern analysis into a court of law.

Extra Credit:

No extra credit is structured into this class.

Examinations:

Both a mid-term and final examination will be administered in compliance with University standards. **The Mid-term examine will be on Wednesday, May 9 and the Final Examination will be on Saturday, May 12th. Both examinations will only be administered on their respective dates.** Both the mid-term and final exams will be comprehensive of all topics presented in this course. Both the mid-term exam and the final exam will be written and also include a skills recognition section to demonstrate the attendees knowledge of various blood patterns.

Quizzes:

A daily quiz will be administered on Monday, Tuesday, Thursday and Friday of this course. Quizzes are generally fifteen points in value.

Participation and attendance:

Students cannot afford to miss any portion of this class in order to maintain a passing grade.

Quizzes	15-20 points each
Midterm Exam	50 points
Final Exam	100 points
Written group summary & crime scene sketch	25 points

Method of Evaluation

This course is letter graded and will follow the grade level breakdown approved by the CJR faculty.

Grade	% of Total Points
A	93 – 100%
A -	90 - 92%
B+	88 – 89%
B	83 - 87%
B-	80 – 82%
C+	78 - 79%
C	70 – 77%
D	60 – 69%
F	0 – 59%

Percentages are based on the total accumulated points from the mid-term, final, any quizzes, the submitted paper and individual presentations.

Disability Statement

Students with disabilities: Any student requesting disability accommodation for this class must inform the instructor by giving appropriate notice. Students are encouraged to contact Disability Support Services at (970) 351-2289 to certify documentation of disability and to ensure appropriate accommodations are implemented in a timely manner.

Honor Code

All members of the University of Northern Colorado community are entrusted with the responsibility to uphold and promote five fundamental values: Honesty, Trust, Respect, Fairness, and Responsibility. These core elements foster an atmosphere, inside and outside of the classroom, which serves as a foundation and guides the UNC community's academic, professional, and personal growth. Endorsement of these core elements by students, faculty, staff, administration, and trustees strengthens the integrity and value of our academic climate.

UNC's Policies

UNC's policies and recommendations for academic misconduct will be followed. For additional information, please see the Dean of Student's website, Student Handbook link <http://www.unco.edu/dos/pdf/StudentCodeofConduct.pdf>

Student Satisfaction Evaluation

Participants will be asked to evaluate the workshop for instructors' knowledge, interest and enthusiasm as well as providing additional information on classes or topics which you would like to see developed as a future offering from UNC.

Portable Electronic Devices

Please extend courtesy to your instructor and fellow students by turning off your portable electronic devices such as: cell phones, pagers, and iPods. Although not an audio issue, text-messaging is a distraction to other students and prevents you from full participation in class. You should keep your portable electronic devices in your backpack or purse during class. Your personal electronic devices should not be on your desks. If you know that you may need to accept an emergency phone call during

class or if you have children in childcare or school, please let the instructor know. If you need to take a phone call during class, please step out of the classroom while you complete your call.

Anyone that violates this policy of academic courtesy will be asked to leave the class immediately for the duration of the class. A student discovered to have violated this request will have to submit a one page, type written request to the instructor for permission for re-enter into the course. This paper will be an explanation as to why the discourteous student should be considered for re-entry back into the class. This request will be reviewed by three student peers from the same class to consider the request. Thank you for your cooperation.

REGISTRATION: You are registering for a credit bearing course and the grade you earn will be recorded on a UNC official transcript. The Office of Extended Studies reserves the right to cancel or reschedule courses based upon enrollment. Enrolled students will be contacted with information of any change.

TUITION: You will be billed by the UNC Bursar's office. Accounts not paid in full by the end of month in which you receive your bill will be assessed a monthly 1.75% finance charge.

WITHDRAWALS AND REFUNDS: In accordance with University and CCHE policy and because of the unique nature of this course, if you drop from this class after Fri, May 4, 2012, you will be legally responsible for payment of full tuition. In order to be eligible to receive any refund of tuition, you must contact the Office of Extended Studies at 1-800-232-1749 to formally withdraw from your class. Your refund, if applicable, will be based on the date of contact with our office. Withdrawals received via telephone during non-business hours will be processed and dated on the next working day. Failure to notify us will result in UNC tuition being owed even though student did not attend or complete the coursework.

Course Day Schedule:

Monday, May 7

Welcome and Introductions of Staff and Students
Biohazard and safety lecture personal protection matrix
Value of Bloodstain analysis at violent crime scenes
Historical overview of Bloodstain Pattern Identification
Equipment and supplies for the bloodstain kit

Pre-Test

Preservation of Bloodstain Evidence:

- Photography
- Video
- Notes
- Sketching
- Collection and Preservation

Bloodstain pattern terminology with slide presentation examples

LUNCH

Laboratory experiment #1: Diameter of Stain vs. Distance Fallen
Laboratory experiment #2: Diameter of Stain vs. Volume of Drop
Laboratory experiment #3: Stain Appearance as a Function of The Target Surface Differences
Group discussion of summary of section one and review
Credit quiz
Case Scenarios

Tuesday, May 8

Laboratory experiment #4: Effect of Impact Angle on Stain Shape
Laboratory experiment #5: Effect of Horizontal Motion on Stain Shape
Group discussion of summary of section two and review
Laboratory experiment #6: Effect of Stain Diameter on Drying Time

Group discussion of summary of section three and review

LUNCH

Laboratory experiment #7: Splashed Bloodstain Dispersion

Laboratory experiment #7A: Dripped Bloodstain Dispersion

Laboratory experiment #8: Cast Off Bloodstain Dispersion

Laboratory experiment #9: Projected Bloodstain Dispersion

Group discussion of summary of section four and review

Credit quiz

Case Scenarios

Wednesday, May 9

Laboratory experiment #14: Gunshot Blood Spatter Patterns

Lecture on interpretation of bloodstain patterns on clothing and moveable objects

Lecture on documentation of bloodstain patterns on clothing and evidence in a laboratory to include measuring, sketching, and photography

Documentation of bloodstain patterns (mock crime scenes) and correlation with the scene and autopsy findings for scene analysis

LUNCH

Chemical applications for detection, enhancement and proper collection techniques

Group discussion and review

Laboratory experiment #10: Course and Fine Spatter Patterns

Laboratory experiment #11: Contact Pattern Recognition

Group discussion of summary of section five and review

Mid-term examination

Thursday, May 10

Processing of crime scenes for bloodstain patterns, documentation, reconstruction and analysis

LUNCH

Credit Quiz

Case Scenarios

Friday, May 11

Lecture on report writing

Preparation and presentation of mock scene reports

Case presentations

Group discussion

LUNCH

Lecture on expert witness testimony

Mock Court in Weld County District Court

Credit quiz

Saturday, May 12

Final examine and submission of crime scene sketches and laboratory exercises

Awarding of Certificates of Completion