

***Professor:***

Brian J. Gestring, M.S.  
Assistant Professor – Chemistry & Physical Sciences/ Forensic Science  
Office – Miller 10 (Hours: Monday 3-4 pm, & Tuesday 9:30-11:30 am)  
(610)606-4666 ext 4488  
[brian.gestring@cedarcrest.edu](mailto:brian.gestring@cedarcrest.edu)

***Course******Overview:***

Forensic science has evolved significantly over the past quarter century. Advances in DNA technology have allowed biological evidence to approach individualization. More sophisticated instrumental techniques have also significantly increased the information potential of other evidence. The availability of all of this new data has also increased the forensic scientist's ability to understand certain events as they transpired during a crime.

Despite the common perception, it is not possible to reconstruct all of the events that occurred during the commission of a crime. Even with all of these recent advances, reconstructing a crime scene is similar to assembling a 1,000 piece puzzle with only 250 pieces. Sometimes those 250 pieces will provide valuable information that will allow the scientist to clearly see certain events. Other times it will only provide background noise of little use.

The most effective way to obtain the best “puzzle pieces” is to utilize the scientific method when documenting and processing the scene. A generalist knowledge is necessary to understand the significance of all of the puzzle pieces and assemble them properly. This process of information synthesis is really the true essence of reconstruction.

***Course******Objectives:***

Advanced Crime Scene Reconstruction will:

- Reinforce the application of the scientific method.
- Augment the students existing knowledge of techniques germane to reconstruction.
- Emphasize the basic concepts in criminalistics.
- Teach case management skills

***Learning******Outcomes:***

Students that complete Advanced Crime Scene Reconstruction will:

- Understand how to utilize the scientific method in the management and reconstruction of a crime scene.
- Learn what information can be extracted from physical evidence to better understand dynamic events.

***Learning  
Outcomes:  
(Cont.)***

- Learn how to evaluate reports and case files from different agencies.
- Develop an appreciation for the generalist background required to fully understand all of the physical evidence involved in reconstruction.

***Required  
Readings:***

A number of resources will be required for this class. Students will be required to purchase two of them. The remainder will be electronically available. You have access to electronic versions of all the texts through ForensicnetBase. To access this service go to <http://library.cedarcrest.edu> then click on “full text” from the top menu. Next Scroll down to the FORENSICnet.Base tab and click on it. You must be on campus to use this feature. Other required readings will be posted on eCollege. The syllabus will indicate which readings are required for each lecture. The hardcopies required are as follows:

- 1) Crime Reconstruction  
Chisum & Turvey  
Elsevier, 2007, ISBN 0-12-369375-6
- 2) A Forensic Scientist’s Guide to Photography  
Gestring  
Self-Published, 2007 available from instructor

FORENSICnet.base texts are:

- 3) Principles of Bloodstain Pattern Analysis  
James, Kish, & Sutton  
CRC Press, 2005 ISBN 0-8493-2014-3
- 4) Color Atlas of Forensic Pathology  
Dix  
CRC Press, 2000, ISBN 0-8493-0278-1

***Times and  
Locations:***

This class is scheduled to meet in Miller 33 on Mondays from 4 – 6 pm and this will remain the default location and time for meetings. For certain exercises this class might also meet in Miller 21 or at another remote location to cover specific material. These alternate location dates will be specified in advance.

***Course  
Notifications:***

All course notifications will occur through your Cedar Crest College e-mail account and might not appear to be from your course instructor. The e-mail subject will indicate FSC 509 update to draw your attention to it. Please check your Cedar Crest account regularly.

***Cedar Crest  
Online:***

This course will also be supported by an online classroom. You should have received an e-mail prior to the start of the semester detailing how to access and utilize the resources that will be made available to you here. If you have not, please notify your professor. This virtual classroom can be accessed through [www.cedarcrestonline.net](http://www.cedarcrestonline.net).

**Course**

**Assessment:**

Student’s progress will be evaluated through several metrics over the course of the semester. Even though this is technically only a lecture course, there will also be a laboratory component will be included in the overall evaluation of student progress.

Component	Value	Explanation
Attendance/ Participation	10 %	Students are expected to attend all scheduled meetings and to arrive at the designated time prepared for class. They must also actively involve themselves in class discussions.
Exam 1	20 %	Essay exam covering the first half of the course.
Exam 2	20 %	Essay exam covering the entire course.
Photography Competency	15%	Students will be expected to demonstrate proficiency in all aspects of forensic photography covered in class
Photogrametry Exercise	15%	Students will be provided with unknown images which they must
Case Assessment	20 %	At the beginning of the semester, students will be presented with a case. They must evaluate the data and write up a concise evaluation of the case outlining: <ul style="list-style-type: none"> <li>• The basic facts of the case.</li> <li>• The evidence that was collected.</li> <li>• The evidence that was analyzed.</li> <li>• If any potentially useful evidence was not collected.</li> <li>• If any potentially useful evidence was not analyzed.</li> </ul> Since the defendant on the case is currently in jail, your conclusion should indicate if there is any reason to reevaluate the case and the defendant’s status in a court of law.

Final Grades will be assigned as follows:

A	100-93	C	76-73
A-	92-90	C-	72-70
B+	89-87	D+	69-67
B	86-83	D	66-60
B-	82-80	F	59-0
C+	79-77		

***Community  
Standards for  
Academic  
Conduct:***

Academic integrity and ethics remain steadfast, withstanding technological change. Cedar Crest College academic standards therefore apply to all academic work, including, but not limited to, handwritten or computer-generated documents, video or audio recordings, and telecommunications.

As a student at Cedar Crest College, each student shall:

- Only submit work which is her own.
- Adhere to the rules of acknowledging outside sources, as defined by the instructor, never plagiarizing or misrepresenting intellectual property.
- Neither seek nor receive aid from another student, converse with one another when inappropriate, nor use materials not authorized by the instructor.
- Follow the instructions of the professor in any academic situation or environment, including taking of examinations, laboratory procedures, the preparation of papers, properly and respectfully using College facilities and resources, including library and computing resources to ensure that these resources may be effectively shared by all members of the College community.
- Abide by the Cedar Crest Computer Use Policy.

If a student perceives a violation of the Academic Standards, he/she will go to their instructor. If you are unable to resolve the problem with the instructor, you should go to the chair of the department. If you need further assistance after consultation with the instructor and the chair, you should see the Provost.

***Honor  
Philosophy:***

The Cedar Crest College Honor Philosophy states that students should uphold community standards for academic and social behavior in order to preserve a learning environment dedicated to personal and academic excellence. Upholding community standards is a matter of personal integrity and honor. Individuals who accept the honor or membership in the Cedar Crest College community of scholars pledge to accept responsibility for their actions in all academic and social situations and for the effect their actions may have on other members of the College community.

Violations of the Academic Honor Code will be dealt with according to the Cedar Crest College Forensic Science Program Procedures and Policy Manual.

## Course Schedule

<b>Week</b>	<b>Date</b>	<b>Topic</b>	<b>Reading</b>
1	M 8/25	Introduction and Course Overview	
<b>2</b>	<b>M 9/01</b>	<b>No Class – Labor Day Holiday</b>	
3	M 9/08	The History of Reconstruction/ Ethical Considerations	1) {1},{2}{3},{4}
4	M 9/15	Bloodstain Patterns Part I (Lecture)	1) {9} 3) {1},{2},{3},{4}, {6}, {7},{8},{9},{10} See e-college for articles
5	M 9/22	Bloodstain Patterns Part II (Hands-on)	1) {9} 3) {1},{2},{3},{4}, {6}, {7},{8},{9},{10} See e-college for articles
6	M 9/29	Death Investigation/ The Forensic Autopsy	4) {1},{2},{3}{4},{5}{6},{7}, {8}, {12} See e-college for additional Readings
7	M 10/06	Bloodstain Patterns Part III (Interpretive statements)	See e-college for reference material
<b>8</b>	<b>M 10/13</b>	<b>No Class – Fall Break</b>	
9	M 10/20	Exam 1	
10	M 10/27	Review of Photography	2) Entire Reference
11	M 11/03	Advanced Photo Techniques/ Interpretive Statements	2) Entire Reference
12	M 11/10	Photogrammetry	See e-college for Readings
13	M 11/17	Review of Firearms/ GSR (Lecture)	1) {8} See e-college for additional Readings
14	M 11/24	Shooting Reconstruction (Hands-on)**	1) {8} See e-college for additional Readings
15	M 12/01	Designing Experiments to address reconstruction Issues/ Methods of Reconstruction/ Legal Considerations	1) {5}, {6}, {7}
16	M 12/08	Exam 2	

\*\* This exercise will be conducted at a remote location. In order to participate, students must obtain suitable eye and ear protection and sign a waiver for the college.