

***Professor:***

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Assistant Professor – Chemistry & Physical Sciences
Office – Miller 10 (Hours Monday 10 am to 12 pm & Tuesday 1 pm to 3 pm)
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Course***Overview:***

No area of Forensic Science as seen growth as rapid as Forensic Biology. This laboratory will teach students the fundamental laboratory techniques used to characterize biological evidence.

Course***Objectives:***

1. For students to develop good laboratory procedure.
2. To gain a fundamental understanding of the nature of various forms of biological evidence.
3. To learn the strengths and limitations of current methods used to characterize biological evidence.

Learning***Outcomes:***

Upon completion of this course, students will:

- 1) learn how to minimize contamination.
- 2) develop an appreciation for the different techniques used to characterize biological evidence.
- 3) learn to write report statements that reflect a proper interpretation of laboratory results.

Course***Assessment:***

Grades for this laboratory will be based upon the nine laboratory assignments. Laboratories 1-8 will be worth 10 % each and laboratory 9 will be worth 20%. Each lab grade will be based upon the student's results and their documentation in the laboratory notebook. Failure to comply with the notebook guideline outlined in the laboratory manual will result in a grade penalty.

Students are expected to come to laboratory prepared. If it becomes evidence that this is not the case, surprise quizzes will be added as an assessment tool. If this happens the average of all of a student's quiz grades will be added as a tenth lab which will be weighted equally to the other exercises.

**Course
Assessment:
(cont.)**

Final Grades will be assigned as follows:

A-	90-100	C-	70-75
B+	88-89	D+	68-69
B	86-87	D	60-67
B-	80-85	F	59-0
C+	76-77		

**Required
Readings:**

Students must come to laboratory prepared. They should review the appropriate lecture material as well as the pertinent readings from the manual listed below.

Forensic Molecular Biology and Population Statistics Laboratory Manual
Spring 2008
Quarino, Ritter, & Kishbaugh

**Times and
Locations:**

The formal time for this laboratory session will be Monday from 1:00 pm until 4:00 pm in Oberkotter 2. Since it is not possible to complete all of these laboratories in the allotted time, students should plan on budgeting extra time.

**Course
Notifications:**

All course notifications will occur through your Cedar Crest College e-mail account. Please check this account regularly.

**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.

Laboratory Schedule

Week	Date	Exercise	Due Date	Clean Up Date
1	M 1/14	Lab Notebook Procedures /Case Assignment Ex. 1 Evidence Documentation/Presumptive Test		
2	M 1/21	Ex. 1 (Cont.) Evidence Documentation/Presumptive Tests		
3	M 1/28	Ex. 1(Cont.) Evidence Documentation/Presumptive Tests	1/30	2/01
4	M 2/04	Ex. 2 Confirmatory Tests for Blood and Semen <i>except</i> p30 by ELISA		
5	M 2/11	Ex. 2 (Cont.) Confirmatory Tests for Blood and Semen <i>except</i> p30 by ELISA	2/27	2/25
6	M 2/18	No Class – AAFS		
7	M 2/25	Ex. 3 p30 by ELISA	3/12	3/12
8	M 3/03	No Class - Spring Break		
9	M 3/10	Ex. 4 Pipet	3/26	3/17
10	M 3/17	Ex. 5 DNA Extraction	03/31	3/31
11	M 3/24	No Class- Easter Break		
12	M 3/31	Ex 6 DNA Quantitation with Real-time PCR	4/07	4/07

Week	Date	Exercise	Due Date	Clean Up Date
13	M 4/07	Ex. 7 DNA Amplification with PCR	04/16	04/14
14	M 4/14	Ex. 8 DNA Separation with Capillary Electrophoresis/Genotyping	5/02	5/02
15	M 4/21	Ex. 9 Case Conclusion	5/02	