American Public University System

The Ultimate Advantage is an Educated Mind

School of Security and Global Studies
Course Number: CMRJ341
Course Name: Criminalistics
Credit Hours: 3
Length of Course: 8 Weeks
Prerequisite: none

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Instructor Information

Instructor: See information provided in the Syllabus link in the classroom

Email: Please use internal classroom messaging system

Course Description (Catalog)

Students will be taught the proper recognition, collection and preservation of physical evidence at the crime scene. This course is designed to make the student aware of the services of a crime laboratory and the proper utilization of these services. The course will concentrate on the significance of physical evidence and the examination of this evidence in the crime laboratory. It includes exploration into the different tests and techniques used in the field and within the laboratory regarding the study of potential evidence and its connection in solving a criminal
STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

case. This course provides a different concept from other investigative techniques as it is scientifically oriented.

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Course Scope

This course is divided into 8 weeks and is organized to give students a broad context in which to study the field of Criminalistics. Topics will include the services of a crime laboratory, how to process crime scenes of various types, and how to collect and preserve physical evidence. It includes exploration into the different scientific tests and techniques used in the field and within the laboratory. Ultimately the student will learn how evidence is tied together and used to solve a criminal case. Instruction is primarily textbook driven with accompanied online lectures and online classroom weekly discussion.

Because it is a survey course of a broad subject, it will cover each topic with a broad brush. However, the reference area and newsgroup discussions will allow a deeper look into any subject area that particularly attracts the student. The student will learn how to use the World Wide Web to research topics related to the material discussed and covered in the textbook.

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Course Objectives (CO)

After successfully completing this course, you will be able to

CO1: Explain the history and development of forensic science as well as the important contributors to the field.

CO2: Describe the services of a typical comprehensive crime laboratory in the criminal justice system.

CO3: Compare and contrast Frye and Daubert decisions as they relate to the admissibility of scientific evidence within a court of law.

CO4: Explain the proper procedures for conducting a systematic search of a crime scene for physical evidence.
CO5: Describe proper techniques for the collection and processing of different forms of physical evidence as well as the proper chain of custody.

CO6: Compare and contrast individual and class characteristics of physical evidence.

CO7: Evaluate the differences between quantitative and qualitative analyses.

CO8: Describe proper collection strategies and laboratory analyses used in conjunction with biological evidence.

Course Delivery Method

This course delivered via distance learning will enable students to complete academic work in a flexible manner, completely online. Course materials and access to an online learning management system will be made available to each student. Online assignments are due by Sunday evening of the week as noted and include Forum questions (accomplished in groups through a threaded forum), examination, and individual assignments submitted for review by the Faculty Member). Assigned faculty will support the students throughout this eight-week course.

Course Resources

Required Course Textbooks


Required Readings

Week 1

Crime Scene Investigation

Week 2
Increasing Predictability and Success Rate

Filling a Critical Need

Week 3

Chromatography

Foundations of Spectroscopy

Week 4

Enhanced Studies of LC/MS/MS Capabilities

Designer Amphetamines

Week 5

Determination of Time Since Deposition

Techniques of DNA Fingerprinting

Week 6

SEM/EDS

Forensic Investigation Techniques

Week 7

Computational Methods

Application of Machine Learning to Toolmarks

Forensic Examination

Week 8

The Future of Forensic Science

eReserves
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Additional course materials are available in eReserves. Click on the following eReserve link and search by course number to access the materials.

Readings that are supplemental and not available in eReserves may be obtained via interlibrary loan. Click on the following interlibrary loan link to request those materials.

### Evaluation Procedures

Grades for this course will be based on the following assignments.

- Introduction Forum: 1%
- Forums (8): 44%
- Laboratory Exercises (3): 20%
- Assignments (2): 20%
- Final Project: 15%
- Total: 100%

### Reading Assignments:

Students will complete the weekly reading assignments as provided. These materials will serve as the primary source from which lectures, discussion forums, assignments, and quizzes are based upon.

### Forum Assignments:

Discussion forum responses should be in essay format and include substantive, detailed content. Your main post (aka research post) should be a minimum of 350 words although you are welcomed and encouraged to exceed this minimum word length requirement. During the weeks in which more than one question is posed in the discussion forum, your cumulative post (addressing all questions) should be a minimum of 350 words. Please remember that the more substantive and detailed all work, the more credit it is apt to receive. A substantive response is one that includes specific content related to the question(s) posed, refers to the class materials or external research, makes a significant contribution to the conversation, and clearly references any external sources used to construct your response. Please be sure to thoroughly cite any external research sources used. Also, please
remember that spelling and grammatical structure count. The Sakai text editor has a built in spell-checker so please take advantage of this tool.

You are required to interact with your peer during each discussion week. A minimum of two (2) follow-up responses to your peers is required. These follow-up posts should be substantive and include a minimum of 150 words. You are welcome and encouraged to exceed this minimum length requirement. Please note that commentary posts only do not count as substantive follow-up posts.

**Assignments:**

Homework Assignments must be prepared in the form of a separate document and uploaded as an attachment to the appropriate assignment location. Assignments that are typed into the assignment box will not be accepted. All assignments must adhere to proper APA formatting guidelines inclusive of a properly formatted title page and reference section.

Please note that all written work for this course will be screened for plagiarism. Assignments that are comprised of excessive amounts of quoted work from authors will not earn high marks as this negates the purpose of an assignment comprised of original material.

Please refer to the directives for each assignment for additional detail and specific guidelines.

**Laboratory Exercises:**

Laboratory assignments must be prepared in the form of a separate document and uploaded as an attachment to the appropriate assignment location. Assignments that are typed into the assignment box will not be accepted. All assignments must adhere to proper APA formatting guidelines inclusive of a properly formatted title page and reference section.

Please note that all written work for this course will be screened for plagiarism. Assignments that are comprised of excessive amounts of quoted work from authors will not earn high marks as this negates the purpose of an assignment comprised of original material.

Please refer to the directives for each laboratory assignment for additional detail and specific guidelines.

**Final Project:**

Students will prepare a final paper that addresses the functions of a specific unit of a contemporary crime lab.
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Crime is at an all-time high in the City of Crimetown, USA. City Officials are determined to reduce crime and have already allocated money for more police officers. They have additional funds and want to allocate a portion to the crime laboratory of Crimetown Police Department. You and your fellow co-workers at the crime laboratory have been asked to prepare a presentation to the City Officials. The City is considering allocating additional funds to one forensic unit within the crime laboratory this year and they wish to gain a better understanding of the functions of the unit and why this unit would be the most helpful in solving crime.

Select one (1) specialized unit within a contemporary crime lab and prepare an 8 -10 page paper addressing the functions of the unit, the importance of the particular forensic examinations within the unit, and how the unit will help investigators solve crime.

Your paper should be 8 -10 pages in length, written in APA 6th edition format (title page, running head, abstract and separate reference page) and include at least 6 references.

Submit your final project to the proper Assignment location. Please remember to include original material that has been summarized by you, the author. All work will be screened for plagiarism. The final project is due by 11:55 PM (EST) on Sunday of Week 8, the final day of the course. Work submitted after the official conclusion of the course will not be accepted so please be sure to have your work submitted by this time frame.

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Course Outline

Please see the Student Handbook to reference the University’s grading scale.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Objectives</th>
<th>Readings</th>
<th>Assignment</th>
</tr>
</thead>
</table>
| 1    | Introduction to Criminalistics and The Crime Scene | **CO-1:** Explain the history and development of forensic science as well as the important contributors to | **Text Readings:**  
Saferstein, Chapters 1 and 2 | Introduction Forum  
Week 1 Forum |
|      |       |            | **In Course Materials:**  
Crime Scene Investigation | | |
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<table>
<thead>
<tr>
<th>CO-2:</th>
<th>Describe the services of a typical comprehensive crime laboratory in the criminal justice system.</th>
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<tr>
<td>CO-3:</td>
<td>Compare and contrast Frye and Daubert decisions as they relate to the admissibility of scientific evidence within a court of law.</td>
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<tr>
<td>CO-4:</td>
<td>Explain the proper procedures for conducting a systematic search of a crime scene for physical evidence.</td>
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<tr>
<td>CO-5:</td>
<td>Describe proper techniques for the collection</td>
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| Lesson Week 1 |

<table>
<thead>
<tr>
<th>Physical Evidence and Physical Properties of Glass and Soil.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO-4: Explain the proper procedures for conducting a systematic search of a crime scene for physical evidence.</td>
</tr>
<tr>
<td>CO-5: Describe proper techniques for the collection</td>
</tr>
</tbody>
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| Text Readings: |
| Saferstein, Chapters 3 and 4 |

| In Course Materials: |
| Increasing Predictability and Success Rate |
| Filling a Critical Need |

<p>| Week 2 Forum |
| Laboratory Exercise 1 |</p>
<table>
<thead>
<tr>
<th>Week</th>
<th>Course Title</th>
<th>CO-5: Describe proper techniques for the collection and processing of different forms of physical evidence as well as the proper chain of custody.</th>
<th>CO-6: Compare and contrast individual and class characteristics of physical evidence.</th>
<th>CO-7: Evaluate the differences between quantitative and qualitative analyses.</th>
<th>Text Readings: Saferstein, Chapters 5, 6, and 7</th>
<th>In Course Materials: Chromatography Foundations of Spectroscopy Lesson Week 3</th>
<th>Week 3 Forum</th>
</tr>
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<tbody>
<tr>
<td>3</td>
<td><strong>Organic Analysis, Inorganic Analysis, and Forensic Microscopy</strong></td>
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<td>4</td>
<td><strong>Drugs and Forensic Toxicology</strong></td>
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</tbody>
</table>
|   | **Forensic Serology, DNA, and Bloodstain Pattern Analysis** | **CO-5:** Describe proper techniques for the collection and processing of different forms of physical evidence as well as the proper chain of custody. | **Text Readings:**
Saferstein, Chapters 10, 11, and 12

**In Course Materials:**
Determination of Time Since Deposition
Techniques of DNA Fingerprinting
Lesson Week 5 | **Assignment 1**

|   | **Saferstein, Chapters 8 and 9** | **In Course Materials:**
Enhanced Studies of LC/MS/MS Capabilities
Designer Amphetamines
Lesson Week 4 | **Week 5 Forum**
**Laboratory Exercise 2** |

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| 6 | **Hairs, Fibers, and Paint, Fire Investigations, and Explosives Investigations** | **CO-8:** Describe proper collection strategies and laboratory analyses used in conjunction with biological evidence. | **Text Readings:**  
Saferstein, Chapters 13, 14, and 15  
**In Course Materials:**  
SEM/EDS  
Forensic Investigation Techniques  
Lesson Week 6  
**Week 6**  
**Forum**  
**Laboratory Exercise 3** |
|---|---|---|---|
| 7 | **Fingerprints, Firearms, Toolmarks, Impression Evidence, Document Examination, Computer Forensics** | **CO-5:** Describe proper techniques for the collection and processing of different forms of physical evidence as well as the proper chain of custody.  
**CO-6:** Compare and contrast | **Text Readings:**  
Saferstein, Chapters 16-19  
**In Course Materials:**  
Computational Methods  
Application of Machine Learning to Toolmarks  
Forensic Examination  
Lesson Week 7  
**Week 7**  
**Forum**  
**Assignment 2** |
| 8 | The Future of Forensic Science | CO-2: Describe the services of a typical comprehensive crime laboratory in the criminal justice system. | Text Readings: Saferstein, Chapter 20 |
|   |                             | CO-5: Describe proper techniques for the collection and processing of different forms of physical evidence as well as the proper chain of custody. | In Course Materials: The Future of Forensic Science |
|   |                             |                                                        | Lesson Week 8 |
|   |                             |                                                        | Final Project |

**Policies**

Please see the [Student Handbook](#) to reference all University policies. Quick links to frequently asked question about policies are listed below.
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Drop/Withdrawal Policy
Plagiarism Policy
Extension Process and Policy
Disability Accommodations

Writing Expectations
Describe your writing expectations.

Citation and Reference Style
Attention Please: Students will follow the APA Format as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

Late Assignments
Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. As adults, students, and working professionals, I understand you must manage competing demands on your time. Should you need additional time to complete an assignment, please contact me before the due date so we can discuss the situation and determine an acceptable resolution. Routine submission of late assignments is unacceptable and may result in points deducted from your final course grade.

Deductions:
Late forum posts can be penalized up to 5 points per day
Late assignments can be penalized up to 5 points per day

Netiquette
Online universities promote the advancement of knowledge through positive and constructive debate – both inside and outside the classroom. Forums on the Internet, however, can occasionally degenerate into needless insults and “flaming.” Such activity and the loss of good manners are not acceptable in a university setting – basic academic rules of good behavior and proper “Netiquette” must persist. Remember that you are in a place for the rewards and excitement of learning which does not include descent to personal attacks or student attempts to stifle the Forum of others.

• Technology Limitations: While you should feel free to explore the full-range of creative composition in your formal papers, keep e-mail layouts simple. The Sakai classroom may not fully support MIME or HTML encoded messages, which means that bold face, italics, underlining, and a variety of color-coding or other visual effects will not translate in your e-mail messages.
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- **Humor Note:** Despite the best of intentions, jokes and especially satire can easily get lost or taken seriously. If you feel the need for humor, you may wish to add “emoticons” to help alert your readers: ;-), : ), 😊

**Disclaimer Statement**
Course content may vary from the outline to meet the needs of this particular group.

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**Online Library**

The Online Library is available to enrolled students and faculty from inside the electronic campus. This is your starting point for access to online books, subscription periodicals, and Web resources that are designed to support your classes and generally not available through search engines on the open Web. In addition, the Online Library provides access to special learning resources, which the University has contracted to assist with your studies. Questions can be directed to librarian@apus.edu.

- **Charles Town Library and Inter Library Loan:** The University maintains a special library with a limited number of supporting volumes, collection of our professors’ publication, and services to search and borrow research books and articles from other libraries.

- **Electronic Books:** You can use the online library to uncover and download over 50,000 titles, which have been scanned and made available in electronic format.

- **Electronic Journals:** The University provides access to over 12,000 journals, which are available in electronic form and only through limited subscription services.

- **Tutor.com:** AMU and APU Civilian & Coast Guard students are eligible for 10 free hours of tutoring provided by APUS. Tutor.com connects you with a professional tutor online 24/7 to provide help with assignments, studying, test prep, resume writing, and more. Tutor.com is tutoring the way it was meant to be. You get expert tutoring whenever you need help, and you work one-to-one with your tutor in your online classroom on your specific problem until it is done.

**Request a Library Guide for your course**
(http://apus.libguides.com/index.php)
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The AMU/APU Library Guides provide access to collections of trusted sites on the Open Web and licensed resources on the Deep Web. The following are specially tailored for academic research at APUS:

- Program Portals contain topical and methodological resources to help launch general research in the degree program. To locate, search by department name, or navigate by school.
- Course Lib-Guides narrow the focus to relevant resources for the corresponding course. To locate, search by class code (e.g., SOCI111), or class name.

If a guide you need is not available yet, please email the APUS Library: librarian@apus.edu.

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Turnitin.com

- **Turnitin.com**: Turnitin.com is a tool to detect plagiarism. Turnitin.com reviews students' papers for matches with Internet materials and with thousands of student papers in its database, and returns an Originality Report to instructors.

Selected Bibliography

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