

**INSTRUCTOR**

David O. Carter, PhD  
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Sciences

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Office Hours: Tuesdays and Wednesdays 10:00AM – 12:00PM or by appointment.

**COURSE DESCRIPTION**

**FS 230 Forensic Sciences (3)**

Survey of scientific methods applied to the collection, analysis and preservation of physical evidence as it is used from the crime scene to the courtroom; quality assurance, ethics, professional practice.

**LEARNING OBJECTIVES**

Forensic science is the natural science branch of the justice system that is concerned with interpreting physical evidence. Investigations proceed by using physical evidence and testimonial evidence to reconstruct past events; victims, suspects, and witnesses provide testimonial evidence. While forensic science is used to resolve civil, criminal, and regulatory matters, this course will focus on criminal investigation. Not surprisingly, forensic science comprises several disparate fields of study and the aim of this course is to provide an introduction to the use of physical evidence in the justice system.

Each student will finish this class with the ability to:

- Define the role of forensic science in civil and criminal investigations (Program Learning Outcome 3)
- Identify and define the various quality assurance strategies in the forensic sciences, including the legal system, ethical conduct, accreditation, and certification (Program Learning Outcome 2)
- Identify the value of physical evidence in a criminal investigation (Program Learning Outcome 3)
- Interpret the data generated from commonly used techniques to analyse physical evidence (Program Learning Outcome 4)

**REQUIRED TEXT**

Houck MM, Siegel JA (2015) Fundamentals of Forensic Science. 3<sup>rd</sup> Edition. Academic Press, Burlington, MA.

**EVALUATION OF STUDENT PERFORMANCE***Examinations*

Assessment is based on the completion of the Ownership Document at the beginning of the semester along with four examinations. These examinations (Zam Time!!!) will cover discrete components of the content and be delivered as oral examinations.

*Ownership Document*

You are also required to complete an Ownership Agreement that is designed to encourage you to think about your future and the reason why you are pursuing a career in forensic science. You are required to complete one Ownership Agreement worth 100 points. Late submissions will be penalized one letter grade per day late.

<b>Activity</b>	<b>Points</b>
Ownership Document	100
Exams: Zam Time!	400 @ 100 exam <sup>-1</sup>
<b>Total</b>	<b>500</b>

The grading scale is:

100% - 90%	A
89% - 80%	B
79% - 70%	C
69% - 60%	D
≤ 59%	F

**TENTATIVE SCHEDULE**

<b>Week</b>	<b>Monday</b>	<b>Chapter</b>	<b>Subject</b>	<b>Notes</b>
1	28 Aug 30 Aug 1 Sep	1 3 24	Introduction, syllabus & roster review The Nature of Evidence Legal Aspects of Forensic Science	Ownership Document
2	4 Sep 6 Sep 8 Sep		<b>Class Cancelled</b> Quality Assurance Ethical and Professional Issues	Labor Day <b>Ownership Document Due</b>
3	11 Sep 13 Sep 15 Sep		<i>Guest Lecture – Carlos Gutierrez, MSFS</i> <b>Class Cancelled</b> Crime Scene Investigation	Carter @ UC San Diego Carter @ UC San Diego
4	18 Sep 20 Sep 22 Sep	2 5 5	Crime Scene Investigation Light and Matter Light and Matter	
5	25 Sep 27 Sep 29 Sep		<b>ZAM TIME 1</b> Friction Ridge Impressions Friction Ridge Impressions	
6	2 Oct 4 Oct 6 Oct	21 22 22	Firearms & Toolmarks Impression Evidence Impression Evidence	
7	9 Oct 11 Oct 13 Oct		<b>Class Cancelled</b> Bloodstain Pattern Analysis Bloodstain Pattern Analysis	Discoverers' Day
8	16 Oct 18 Oct 20 Oct		<b>ZAM TIME 2</b> Serology DNA Analysis	
9	23 Oct 25 Oct 27 Oct	11 7 7	DNA Analysis Medicolegal Death Investigation Pathology	
10	30 Oct 1 Nov 3 Nov		<i>Guest Lecturer – Charlotte Carter, MFS</i> Taphonomy Taphonomy	
11	6 Nov 8 Nov 10 Nov	9 8 8	Entomology Anthropology & Odontology Anthropology & Odontology	
12	13 Nov 15 Nov 17 Nov		<b>ZAM TIME 3</b> Separation Methods – Forensic Chemistry <i>Guest Lecturer – Kate Perrault, PhD</i>	
13	20 Nov 22 Nov 24 Nov	14	<i>Guest Lecturer – Kate Perrault, PhD</i> <b>Class Cancelled</b> <b>Class Cancelled</b>	<b>Thanksgiving</b> <b>Thanksgiving</b>

14	27 Nov	4	Microscopy
	29 Nov	12	Hair
	1 Dec	15	Fibers
15	4 Dec	16	Paint
	6 Dec	17	Soil & Glass
	8 Dec	17	Soil & Glass
16	12 Dec	ZAM TIME 4, 11:00AM – 1:00PM	
		FINALS WEEK	

## ADDITIONAL DIVISIONAL AND UNIVERSITY POLICES

### *Academic Integrity*

Students are expected to follow the Forensic Sciences Code of Conduct. In addition, students are expected to read and abide by the Student Rules of Conduct which are available in your copy of the Student Handbook. Academic dishonesty, in any form, will not be tolerated.

### *Absences*

- Unexcused absences for two consecutive weeks may result in being withdrawn from the course by the instructor.
- All Zam Team members will earn the same grade, whether present or absent.
- An unplanned, excusable absence must be communicated to the instructor within one week of the missed class. Necessary arrangements will be made to meet student learning objectives.
  - Excused absences include but are not limited to
    - Documented illness
    - Accident
    - Documented family emergency – parent or guardian communication required
    - Determination of other valid excuses for missed classes is at the sole discretion of the instructor.
- A planned, excused absence must be communicated to the instructor at least one week prior to class. Necessary arrangements will be made to meet student learning objectives.

### *ADAA Statement*

Pursuant to several federal and state laws, including the Americans with Disabilities Act of 1990, as amended by the ADA Amendments Act of 2008, and Section 504 of the Rehabilitation Act of 1973, all qualified students with disabilities are protected from discrimination on basis of disability and are eligible for reasonable accommodations or modifications in the academic environment to enable them to enjoy equal access to academic programs, services, or activities. If a student would like to determine if they

meet the criteria for accommodations, they should contact the Counseling Center at 808-735-4845 for further information.

#### *Policy on Communication*

The University provides a Chaminade email address for all students. Official Chaminade communications will be sent to the students' Chaminade email address and instructors will use this email to communicate with students. It is the responsibility of the student to check their email frequently. Report email-related problems to the Helpdesk at 808-735-4855 or helpdesk@chaminade.edu.

#### *Title IX Declaration*

Chaminade University of Honolulu recognizes the inherent dignity of all individuals and promotes respect for all people. Sexual misconduct, physical and/or psychological abuse will NOT be tolerated at CUH. If you have been the victim of sexual misconduct, physical and/or psychological abuse, we encourage you to report this matter promptly. As a faculty member, I am interested in promoting a safe and healthy environment, and should I learn of any sexual misconduct, physical and/or psychological abuse, I must report the matter to the Title IX Coordinator. Should you want to speak to a confidential source you may contact the Chaminade Counseling Center at (808) 735-4845.

#### *Electronic Devices*

Use of music devices is prohibited during all Natural Science and Mathematics classes at Chaminade, unless specifically permitted by your instructor. Use of music devices in laboratories is a safety issue. In addition, use of music devices in any class is discourteous and may lead to suspicion of academic misconduct. Students who cannot comply with this rule will be asked to leave class and may be subject to laboratory safety violation fines. You will be asked to leave class and marked absent if you do not comply. This will negatively affect your grade. Please refer any questions to the Dean of Natural Sciences and Mathematics.

The instructor may modify elements of this syllabus according to the operational needs of the class.