



School of Natural Sciences and Mathematics
Forensic Sciences Department

FS 233L, Physical Evidence Laboratory

Henry Hall Lab 6, M & T 2:30P-5:20P

Credits: 1

Section: 01 (T) & 02 (M)

Term: Spring Semester 2026

Instructor Information



Instructor: Carlos A. Gutiérrez Ayala, Ph.D.
Email: Carlos.gutierrez@chaminade.edu
Phone: (808) 739 8352
Office Location: 207A Eiben Hall
Office Hours: Wednesdays 1:00P – 2:30P
Meetings during Office Hours can be scheduled
<https://calendar.app.google/2Jfj1t1Mzs4XtLgf9>



Communication

You can also request a meeting outside of Office Hours. To do so, send an email to carlos.gutierrez@chaminade.edu. Include multiple dates and times that you are available to meet. (Will respond in 24hrs/48hrs)

School & Department Information

School of Natural Sciences and Mathematics

Office Location: Wesselkamper, Room 116 [Building name and number can be found on each [Academic Schools' website](#).] Phone: (808) 440 4204 [Academic School's phone number can be found on School's website.]

If you have questions regarding the Forensic Sciences Department name, reach out to your Instructor or the School of Natural Sciences and Mathematics.

Course Description & Materials

Catalog Course Description

FS 233L Physical Evidence Laboratory (1)

Laboratory exercises to analyze various forms of physical evidence. Explores the underlying theory, protocols, and relevance for examining and interpreting physical evidence.

Pre-Requisites: FS-230.

Time Allocation

This one-credit course requires 45 clock hours of students' engagement per the official CUH Credit Hour Policy. Students enrolled in this course are expected to spend 37.5 hours in the Laboratory. These laboratory hours include Lab activities and exams. There will be an additional 7.5 hours of work beyond what is listed here (course readings and homework assignments), averaging 0.5 hours per week.

Required Materials

This Lab requires a textbook that complements the topics covered each week. Each week, the laboratory is based on the textbook chapters, with some additional materials included in the recommended textbooks. My advice is to read the book chapters before each lab and take notes during the lectures (beginning of each lab).

Textbooks

1. Bell, Suzanne. (2019) *Forensic Science, An Introduction to Scientific and Investigative Techniques*. CRC Press. Boca Raton, FL, USA. ISBN: 978113804812-6

During this lab, all students must wear a lab coat and closed-toe shoes.

Canvas

Canvas will be used to store class materials, submit assignments, and access your grade. Canvas will also be used for email communication, but you can also email me directly at carlos.gutierrez@chaminade.edu

Google Drive

This drive will be used to house larger files, if necessary.

Learning Outcomes

Program Learning Outcomes (PLOs)

Forensic science is the natural science branch of the justice system. It is concerned with interpreting physical evidence. Investigations proceed by using physical evidence and testimonial evidence to reconstruct past events. Not surprisingly, forensic science comprises several disparate fields of study and the aim of this course is to combine all the scientific knowledge to reconstruct a case and give the answers needed by the justice system.

Upon completion of the B.S. in Forensic Sciences, the student will be able to:

1. Apply the scientific method in an adaptive and mindful manner.
2. Use techniques for recognition, documentation, analysis, and interpretation of physical evidence.
3. Implement quality assurance programs, incorporating ethics and professional practice, to act as stewards of justice and peace throughout the broader community.
4. Communicate disciplinary knowledge to diverse audiences.

Course Learning Outcomes (CLOs)

Upon completion of the FS 233L, the students will be able to:

1. Learn practical techniques from various forensic disciplines.
2. Identify, collect, and preserve various forms of physical evidence.
3. Follow protocols for processing various types of evidence.
4. Communicate investigative and analytical results.

Marianist Values

This class represents one component of your education at Chaminade University of Honolulu. An education in the Marianist Tradition is marked by five principles and you should take every opportunity possible to reflect upon the role of these characteristics in your education and development:

1. Education for formation in faith.
2. Provide an integral, quality education.
3. Educate in family spirit.
4. Educate for service, justice and peace, and integrity of creation.
5. Educate for adaptation and change.

Native Hawaiian Values

Education is an integral value in both Marianist and Native Hawaiian culture. Both recognize the transformative effect of a well-rounded, value-centered education on society, particularly in seeking justice for the marginalized, the forgotten, and the oppressed, always with an eye toward God (Ke Akua). This is reflected in the 'Olelo No'eau (Hawaiian proverbs) and Marianist core beliefs:

1. Educate for Formation in Faith (Mana) E ola au i ke akua ('Olelo No'eau 364) May I live by God.

2. Provide an Integral, Quality Education (Na'auao) Lawe i ka ma'alea a kū'ono'ono ('Ōlelo No'eau 1957) Acquire skill and make it deep.
3. Educate in Family Spirit ('Ohana) 'Ike aku, 'ike mai, kōkua aku kōkua mai; pela iho la ka nohana 'ohana ('Ōlelo No'eau 1200) Recognize others, be recognized, help others, be helped; such is a family relationship.
4. Educate for Service, Justice and Peace (Aloha) Ka lama kū o ka no'eau ('Ōlelo No'eau 1430) Education is the standing torch of wisdom.
5. Educate for Adaptation and Change (Aina) 'A'ohe pau ka 'ike i ka hālau ho'okahi ('Ōlelo No'eau 203) All knowledge is not taught in the same school

Alignment of Course Learning Outcomes

	CLO 1	CLO 2	CLO 3	CLO 4
Marianist Values	x	x	x	x
PLOs	x	x	x	x
Native Hawaiian Values	x	x	x	x
Gen Ed Learning Outcomes (if applicable)				

Course Activities

Evaluation of Student Performance

All grades will be posted in Canvas within one week of assignment/exam submission. Attendance grades will be posted to Canvas every week. Your grade will be kept up to date throughout the semester. You are encouraged to contact me at carlos.gutierrez@chaminade.edu at any time to discuss your grades. I strongly encourage you to check your grades regularly. All assignments have fixed due dates, and your score will be penalized 10 points for each day they are late. Additionally, students with unexcused absences will receive 0 points for attendance and lab exercises.

- Examinations (Total Points 520):

During the 16 weeks of laboratory, you are required to complete the following laboratory activities:

Attendance: (110 points) Laboratory is scheduled to meet in person on Monday (Section 2) and Tuesday (Section 1), unless otherwise indicated. This laboratory is based on teamwork; you will be part of one Team Lab.

- a. You will earn ten points for each lab you attend, starting with the first lab on January 12th and 13th. Please be aware that the total attendance points will change if a class period is canceled due to illness, weather, or other reason

If the student has an unexcused absence and misses the laboratory, the laboratory will be evaluated with 0 points. If you are an athlete or in the military, you shall provide a letter from your coach or commanding officer before the class session.

At the beginning of this Lab, the class will be divided into Teams. Each team will remain until the end of the semester. **THIS LABORATORY IS BASED ON TEAMWORK.**

- b. Lab activities: (110 points) Expressing your expert point of view in forensic sciences is crucial. Because of that, you will need to participate and do an analysis in every laboratory. Completing your weekly lab exercise with your laboratory team will earn 110 points per semester (10 points per lab session). If the student has an unexcused absence and misses the laboratory, the laboratory will be evaluated with 0 points.
- c. The THE: (100 points) You need to collect trace evidence according to the instructor's instructions. If you do not complete this task, you will receive 0 points.
- d. The Amazing Forensic Final Exam: (200 points) This is a team final lab exam, and you will apply all the knowledge gained during the semester. This final lab exam is worth 300 points.

Unexcused absences from any midterm or final exam will result in 0 points.

If any student misses 2 consecutive labs (2 weeks), they will be administratively withdrawn from the lab.

Course Policies

Extra Credit

If any student needs an extra credit assignment, they should approach the instructor at least one month before Lab finals week (April 27th to May 1st) to discuss possible options. It won't be an extra credit assignment for unexcused absences or other situations where students have shown a lack of interest in the course.

Lateness:

Students should be in class on time. If a student is late by 2-10 minutes, they will lose 5 points from their attendance. If they are more than 10 minutes late, they will lose all 10 attendance points assigned for that lab.

Changes to the Syllabus

While the provisions of this syllabus are as accurate and complete as possible, your instructor reserves the right to change any provision herein at any time. Every effort will be made to keep you advised of such changes, and information about such changes will be available from your instructor.

Grades of Incomplete

This is a very unique situation for this class. The only circumstances in which some students might find themselves in this situation are if they have an extra credit assignment pending for evaluation or submission. This will be discussed between the instructor and the student.

Final Grades

Final grades are submitted to [Self-Service](#):

Activity	Points
Lab exercises	110
The THE	100
The Amazing Final Exam	200
Attendance	110 (10 point per class)
Total	520

Points	%	Letter Grade
520 – 468	100 – 90	A
467 – 374	89 – 80	B
373 – 261	79 – 70	C*
260 – 156	69 – 60	D**
156 – 0	59 – 0	F

***This class is a prerequisite for FS 340/L. The student should get a minimum C grade to be enrolled in the next FS course.**

**** A student who receives a D as a final grade in this course is considered to have passed, but cannot use this grade if they need to take the next FS course.**

Important Information

Academic Honesty

Academic honesty is an essential aspect of all learning, scholarship, and research. It is one of the values regarded most highly by academic communities throughout the world. Violations of the principle of academic honesty are extremely serious and will not be tolerated.

Students are responsible for promoting academic honesty at Chaminade by not participating in any act of dishonesty and by reporting any incidence of academic dishonesty to an instructor or to a University official. Academic dishonesty may include theft of records or examinations, alteration of grades, and plagiarism, in addition to more obvious dishonesty.

Questions of academic dishonesty in a particular class are first reviewed by the instructor, who must make a report with recommendations to the Dean of the Academic Division. Punishment for academic dishonesty will be determined by the instructor and the Dean of Academic Division and may include an “F” grade for the work in question, an “F” grade for the course, suspension, or dismissal from the University.

For the most up to date information, please refer to the [Academic Honesty Policy](#) on the Chaminade University Catalog website.

TITLE IX AND NONDISCRIMINATION STATEMENT:

Chaminade University of Honolulu is committed to providing a learning, working and living environment that promotes the dignity of all people, inclusivity and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking. As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. For pregnant and parenting students, I am also obligated to provide you with similar resources for support and protections available to you. My goal is to make sure that you are aware of the range of options available to you and have access to the resources and support you need.

Nondiscrimination Policy & Notice of Nondiscrimination

The university is committed to comply with all State and Federal statutes, rules, and regulations which prohibit discrimination. The university is committed to a policy of nondiscrimination on the basis of race, sex, gender identity and expression, age, religion, color, national origin (including shared ancestry and ethnic characteristics), ancestry, citizenship, disability, genetic information, marital status, breastfeeding, arrest and court record (except as permissible under State law), sexual orientation, or status as a covered veteran. Inquiries about Title IX or general Civil Rights concerns may be referred to the University’s Title IX Coordinator, the U.S.

Department of Education's Office for Civil Rights, or both, and contact information may be found [HERE](#). *On-campus Confidential Resources may also be found here at [CAMPUS CONFIDENTIAL RESOURCES](#).*

The University's Nondiscrimination Policy and Grievance Procedures can be located on the University webpage at: <https://chaminade.edu/compliance/title-ix-nondiscrimination-policies-procedures/>.

To report information about conduct that may constitute sex discrimination or make a complaint of sex discrimination under Title IX, please refer to the [Campus Incident Report form](#). Chaminade University of Honolulu prohibits sex discrimination in any education program or activity that it operates.

The NOTICE of NONDISCRIMINATION can be found here: [Notice of Nondiscrimination](#).

[Hazing Prevention Resources and Athlete Helpline:](#)

Assists athletes, parents, coaches, and any allies interested in ensuring the physical and mental safety of sports communities by offering confidential emotional support, crisis intervention, athlete-focused informational resources, and guidance on concerns about any type of abuse—*including hazing*.

Chaminade University's Hazing Policy:

<https://catalog.chaminade.edu/studenthandbook/codeofconduct>

<https://hazingpreventionnetwork.org/athlete-helpline/>

<https://hazingpreventionnetwork.org/how-to-report-hazing/>

Basic Needs Resources: <https://chaminade.edu/basic-needs/>

[Campus Safety/ SafeSwords](#)

A program for students, faculty, and staff who may feel uncomfortable or unsafe walking alone on campus at any time of the day. Call security, and a security professional will meet you at your on-campus location. The security professional will escort you to your residence hall, car, etc. Students may utilize this when walking to and from night classes around campus or after late night events. [SafeSwords Webpage](#)

[CUH Alert Emergency Notification](#)

To get the latest emergency communication from Chaminade University, students' cell numbers will be connected to Chaminade's emergency notification text system. When you log in to the Chaminade portal, you will be asked to provide some emergency contact information. If you provide a cellphone number, you will receive a text from our emergency notification system

asking you to confirm your number. You must respond to that message to complete your registration and get emergency notifications on your phone.

Assessment for Student Work

With the goal of continuing to improve the quality of educational services offered to students, Chaminade University conducts assessments of student achievement of course, program, and institutional learning outcomes. Student work is used anonymously as the basis of these assessments, and the work you do in this course may be used in these assessment efforts.

Student with Disabilities Statement

Chaminade University of Honolulu offers accommodations for all actively enrolled students with disabilities in compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Act (2008).

Students are responsible for contacting Kokua Ike: Center for Student Learning to schedule an appointment. Verification of their disability will be requested through appropriate documentation and once received it will take up to approximately 2–3 weeks to review them. Appropriate paperwork will be completed by the student before notification will be sent out to their instructors. Accommodation paperwork will not be automatically sent out to instructors each semester, as the student is responsible to notify Kokua Ike via email at ada@chaminade.edu each semester if changes or notifications are needed.

Kōkua 'Ike: Tutoring & Learning Services

Chaminade is proud to offer free, one-on-one tutoring and writing assistance to all students. Tutoring and writing help is available on campus at Kōkua 'Ike: Center for Student Learning in a variety of subjects (including, but are not limited to biology, chemistry, math, nursing, English, etc.) from trained Peer and Professional Tutors. Please check [Kōkua 'Ike's](#) website for the latest times, list of drop-in hours, and information on scheduling an appointment. Free online tutoring is also available via TutorMe. Tutor Me can be accessed 24/7 from your Canvas account. Simply click on Account > TutorMe. For more information, please contact Kōkua 'Ike at tutoring@chaminade.edu or 808-739-8305.

Instructor and Student Communication

Questions for this course can be emailed to the instructor at carlos.gutierrez@chaminade.edu. Online, in-person, and phone conferences can also be arranged.

Use of IA Tools

During this course, students are allowed to use any type of AI tools, such as ChatGPT, Bing AI, Grammarly, among others, only for study purposes. Using AI tools to answer or write reports, midterm or final exams, extra credit papers, or other assessments is strictly prohibited and will result in a grade of 0 points.

United Nations Sustainable Development Goals “SDG”



This course covers the UN *SDG 16: “Pace, Justice and Strong Institutions”*, Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

Technical Assistance for Canvas Users

- Get started and find help on specific topics at the [Canvas Community](#)
- Contact the Chaminade IT Helpdesk for technical issues: helpdesk@chaminade.edu, or call (808) 735-4855

Tutoring and Writing Services

Chaminade is proud to offer free, one-on-one tutoring and writing assistance to all students. Tutoring and writing help is available on campus at Kōkua `Ike: Center for Student Learning in a variety of subjects (including, but are not limited to: biology, chemistry, math, nursing, English, etc.) from trained Peer and Professional Tutors. Please check Kōkua `Ike’s website (<https://chaminade.edu/advising/kokua-ike/>) for the latest times, list of drop-in hours, and information on scheduling an appointment. Free online tutoring is also available via Smarthinking. Smarthinking can be accessed 24/7 from your Canvas account. Simply click Account – Notifications – Smarthinking. For more information, please contact Kōkua `Ike at tutoring@chaminade.edu or 808-739-8305.

Cell phones, tablets, and laptops

Out of consideration for your classmates, please set your cell phone to silent mode during class. Students are encouraged to bring laptops or tablets to class as the instructor will assign online activities and readings that will require the use of a computer or tablet. Laptops and tablets should not be misused, such as by checking distracting websites. Use your best judgment and respect your classmates and instructor.

Readings & Due Dates

TENTATIVE SCHEDULE

Week	Date	Location	Topic	Notes
1	12-13 Jan	Lab 6	-Introduction & Syllabus Review. -Beginning of Course Learning Survey	-Welcome! https://forms.gle/1WXM8QAKoepxmQyd7 -Add/Drop period, Jan 12 th -20 th .
2	19-20 Jan		Dr. Martin Luther King Jr. Day	Holiday, No classes
3	26-27 Jan	Lab 6- CSH	Crime Scene Investigation	Lab Coat and Tyvek Suit Required
4	2-3 Feb	Lab 6	Trace Evidence I	Lab Coat Required
5	9-10 Feb	Lab 6	Take Home Exercise "The THE"	-AAFS No Lab -Withdraw without Record Deadline, Feb 13 th
6	16-17 Feb	Lab 6	Presidents' Day	Holiday, No classes
7	23-24 Feb	Lab 6	Take Home Exercise "The THE"	-ACSR No Lab
8	2-3 March	Lab 6	Trace Evidence II "The THE" analysis	Lab Coat Required
9	9-10 March	Lab 6	Fingerprints & Shoe Impressions	Lab Coat Required
10	16-17 March		Spring Break	No Classes
11	23-24 March	Lab 6	Body fluids analysis	-Lab Coat Required -Withdraw Deadline (W) March 25 th
12	30-31 March	Lab 6	Bloodstain Pattern Analysis	-Lab Coat Required -Fall Semester Registration: <ul style="list-style-type: none">• March 30th 90+ credits and Students Athletes.• April 1st 60+ Credits.• April 2nd 30+ Credits.

				• April 3 rd All students.
13	6-7 April	Lab 6	Forensic Anthropology	Lab Coat Required
14	13-14 April	Lab 6	Forensic Microanthropology	Lab Coat Required
15	20-21 April	Lab 6	Forensic Taphonomy and Forensic Entomology	Lab Coat Required
16	27-28 April	Lab 6/CSH	-End of Course Learning Survey <i>-The Amazing Forensic Final Exam</i>	<u>https://forms.gle/LbVcFfKDgzkBCMDe7</u> <i>Lab 6 and CSH, Lab Coat and Tyvek Suit Required</i>