



Course Syllabus
 Chaminade University Honolulu
 3140 Waiialae Avenue - Honolulu, HI 96816
www.chaminade.edu

Course Number: FS 460L
Course Title: Forensic Taphonomy Laboratory
Department Name: Forensic Sciences
School Name: Natural Sciences and Mathematics
Term: Spring 2024
Course Credits: 1
Class Meeting Days: Monday
Class Meeting Hours: 2:30PM – 5:20PM
Class Location: L0 Henry Hall



Instructor Name: David O. Carter
Email: david.carter@chaminade.edu
Phone: 808.739.8352
Office Location: 207A Eiben Hall
Office Hours: Meetings can be scheduled through my [Google Calendar](#). My Office Hours are:

Tuesday & Thursday 2:00pm – 4:00pm Hawaii Time
 Friday 2:30pm – 4:30pm Hawaii Time

University Course Catalog Description

FS 460L Forensic Taphonomy Laboratory (1)
 Quantitative and qualitative methods for investigating decomposition and its application in medicolegal death investigation. *Concurrent registration in FS 460 required.*

Course Learning Outcomes & Program Learning Outcomes

Each student will finish this class with the ability to:	Program Learning Outcomes
Identify and measure processes of decomposition and postmortem changes	2. Use techniques for recognition, documentation, analysis, and interpretation of physical evidence
Design and conduct a decomposition study, including the analysis and presentation of data	1. Apply the scientific method in an adaptive and mindful manner 3. Implement quality assurance programs, incorporating ethics and professional practice, to act as stewards of justice and peace throughout the broader community

Credit Hour Policy

FS 460L Forensic Taphonomy Laboratory is a one-credit hour course that requires a minimum of 45 hours of student engagement, per the official Credit Hour Policy. Student enrolled in FS 460L are expected to spend 39 hours in class. There will be an additional 6 hours of work required outside of class. This work includes readings, data collection, and data organization.

Required Learning Materials

This class requires the use of several learning materials, both electronic and physical. This class will be managed electronically through Canvas and Google. All learning materials will be provided.

Device

Bring a device with you to every class. We will be looking at a lot of images and organizing a lot of data in spreadsheets.

Reading Materials

There are three publications that are vital to your success:

Carter DO, Orimoto A, Gutierrez CA, Ribéreau-Gayon A, Pecsí EL, Perrault KA, Peterson AJL (2023) A synthesis of carcass decomposition studies conducted at a tropical (Aw) taphonomy facility: 2013 – 2022. *Forensic Science International: Synergy*. 7:100345.

Keough N, Myburgh J, Steyn M (2017) Scoring of decomposition: a proposed amendment to the method when using a pig model for human studies. *Journal of Forensic Sciences*. 62:986-993.

Megyési MS, Nawrocki SP, Haskell NH (2005) Using accumulated degree days to estimate the postmortem interval from decomposed human remains. *Journal of Forensic Sciences*. 50:618-626.

Canvas

Canvas will serve as the primary repository for university documents and your grade, which will be updated each week. Canvas will also be used for email communication.

Google Drive

You will receive a link to a shared Google Drive. This drive will be used to house larger files including publications, presentation files, images, and other files related to the class.

Decomponauts T-Shirt

The world is sorely in need of forensic scientists that have a robust understanding of taphonomy and can serve as a diplomat of death and decomposition. These people are called Decomponauts. The great thing is that completing this class successfully will provide you with the knowledge to be a Decomponaut.

This means that you need a Decomponaut t-shirt. You need to design the shirt and get it ordered as soon as possible. We will start to tackle this job in Week 5 (12 February).

Tentative Class Schedule

Week	Date	Subject	Notes
1	8 Jan	Introduction Syllabus Review Health & Safety Guidelines	
2	15 Jan	No Classes	Dr. Martin Luther King Jr. Day
3	22 Jan	What is an Experiment? Forensic Taphonomy Database Overview Initial Availability	Taphonomy Pre-Test
4	29 Jan	Quality Assurance/Quality Control Forensic Taphonomy Image Collection	Forensic Taphonomy Image Collection Exercise
5	5 Feb	QA/QC Recap Total Body Score Training Megyesi et al. (2005); Keough et al. (2017)	QA/QC Quiz
6	12 Feb	Using the Forensic Taphonomy Database to Estimate Postmortem Interval Team Formation for T-Shirt Design	
7	19 Feb	Asynchronous Class: Decomponaut T-Shirt Design	Presidents Day AAFS – Denver, CO
8	26 Feb	Presentation of T-shirt Designs Selection of T-shirt, Completion of Order Sheet	
9	4 Mar	Site Visit Taphonomy Equipment Inventory & Training	Meet at Crime Scene House
10	11 Mar	Site Preparation – Dress Accordingly Confirm Availability	Meet at Crime Scene House
11	18 Mar	No Classes	Spring Break
12	25 Mar	Decomposition Study: Data Collection	Meet at Crime Scene House
13	1 Apr	Decomposition Study: Data Collection	Meet at Crime Scene House
14	8 Apr	Decomposition Study: Data Collection	Meet at Crime Scene House
15	15 Apr	Decomposition Study: Data Organization & Review	
16	22 Apr	Testing the Forensic Taphonomy Database: Estimating Postmortem Interval	Lab Exam Week

Assessment

Taphonomy Pre-Test

You will complete a Pre-Test that will allow me to gauge your knowledge of taphonomy. Your answers will help me prepare the materials to best serve you.

Taphonomy Image Collection Exercise

This is an exercise to get familiar with the Forensic Taphonomy Image Collection. You will answer a series of questions related to the images that comprise the collection. Bring a device that allows you to view images in high quality.

Quality Assurance/Quality Control Quiz

QA/QC is essential to science. We must build and maintain a habit of working professionally to meet high standards of quality. This quiz will be used to bolster your fundamental understanding of professional practice including cognitive bias and ethical conduct.

Carcass Decomposition Study

You will be assigned decomposition metrics to collect, organize, and analyze. You are responsible for managing your datasets. Decomposition metrics will include:

- Total Body Score
 - Megyesi et al. (2005)
 - Keough et al. (2017)
- Skin Data
 - pH
 - Eh
 - Temperature
- Larval Mass Data
 - pH
 - Eh
 - Temperature
- Ambient Temperature & Accumulated Degree Days
- Ambient Relative Humidity & Accumulated Humidity Days

You are required to submit an organized dataset in Google Sheets/Microsoft Excel format. You will earn 10 points per data set for a total of 100 points.

Grading

Grades in this class are calculated using this scale:

Activity	Points	
Attendance	65	5 points per in-person class
Taphonomy Pre-Test	50	5 points per question
Taphonomy Image Collection Exercise	51	3 points per question
QA/QC Quiz	20	2 points per question
Taphonomy Dataset	100	10 points per data set
Total	286	

Points	%	Letter Grade
286 – 256	100 – 90	A
255 – 228	89 – 80	B
227 – 199	79 – 70	C
198 – 171	69 – 60	D
170 – 0	59 – 0	F

Instructor and Student Communication

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

Program Learning Outcomes (PLO)

Upon completion of the degree program in Forensic Sciences, students 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

Marianist Characteristics & Native Hawaiian Values

Education is an integral value in both Marianist and Native Hawaiian culture and this class represents one component of your education at Chaminade University of Honolulu. 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 (‘Olelo 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 (‘Olelo No’eau 1200) Recognize others, be recognized, help others, be helped; such is a family relationship

4. Educate for Service, Justice, Peace and the Integrity of Creation (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

This class will focus on an education in the forensic sciences as an education in service, justice, and peace. This class will provide you with an opportunity to acquire an integral, quality set of skills that will help you to provide service, justice, and peace to the recently deceased and bereaved. You will also that most forensic scientists are public servants that conduct science for the benefit of society. Forensic scientists analyze, and speak for, evidence so that justice can be served and peaceful society can flourish.

University Attendance Policy

Students are expected to attend regularly all courses for which they are registered. Students should notify their instructors when illness or other extenuating circumstances prevents them from attending class and make arrangements to complete missed assignments. Notification may be done by emailing the instructor’s Chaminade email address, calling the instructor’s campus extension, or by leaving a message with the instructor’s main office. It is the instructor’s prerogative to modify deadlines of course requirements accordingly. Any student who stops attending a course without officially withdrawing may receive a failing grade. Unexcused absences equivalent to more than a week of classes may lead to a grade reduction for the course. **Unexcused absences may include (but are not limited to): work issues, travel, or illness without a doctor’s note.** Any unexcused absence of two consecutive weeks or more may result in being withdrawn from the course by the instructor, although the instructor is not required to withdraw students in that scenario. Repeated absences put students at risk of failing grades.

Students with disabilities who have obtained accommodations from the Chaminade University of Honolulu ADA Coordinator may be considered for an exception when the accommodation does not materially alter the attainment of the learning outcomes. Federal regulations require continued attendance for continuing payment of financial aid. When illness or personal reasons necessitate continued absence, the student should communicate first with the instructor to review the options. Anyone who stops attending a course without official withdrawal may receive a failing grade or be withdrawn by the instructor at the instructor’s discretion.

Academic Conduct Policy

Any community must have a set of rules and standards of conduct by which it operates. At Chaminade, these standards are outlined so as to reflect both the Catholic, Marianist values of the institution and to honor and respect students as responsible adults. All alleged violations of the community standards are handled through an established student conduct process, outlined in the Student Handbook, and operated within the guidelines set to honor both students’ rights and campus values.

Students should conduct themselves in a manner that reflects the ideals of the University. This includes knowing and respecting the intent of rules, regulations, and/or policies presented in the Student Handbook, and realizing that students are subject to the University’s jurisdiction from the time of their admission until their enrollment has been formally terminated. Please refer to the Student Handbook for more details. A copy of the Student Handbook is available on the Chaminade website.

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.

Mobile Devices

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 laptop or tablet. Laptops and tablets should not be misused, such as checking distracting websites. Use your best judgment and respect your classmates and instructor.

Disability Access

Chaminade University of Honolulu is committed to providing reasonable accommodations for persons with documented disabilities. Any student who believes that they may need accommodations must first register with the Counseling Center. Registration with the Counseling Center begins the process of determining whether the student meets the requirements for a documented disability in accordance with the Americans with Disabilities Act (ADA), even if accommodations may not be needed for this particular class. The contact information for the Counseling Center is (808) 735-4845, 739-4603, or by email at counselingcenter@chaminade.edu. It is important for students to contact the Counseling Center as soon as possible so that accommodations are implemented in a timely fashion and to allow your instructor(s) to plan accordingly. Students will be required to provide written documentation to the Counseling Center in order for a determination to be made as to whether the requirements for a documented disability under the ADA are met.

Failure to provide written documentation through the Counseling Center will prevent your instructor from making the necessary accommodations, instructors cannot provide accommodations unless they have been prescribed by the Counseling Center. Once you have received an official notice of accommodations from the Counseling Center, it is also very important to discuss these accommodations directly with your instructor so that they can better support your needs. If you have specific questions regarding your individualized accommodations, you may speak directly with your instructor and/or you may contact the Counseling Center.

Title IX Compliance

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. If you or someone you know has been harassed or assaulted, you can find the appropriate resources by visiting Campus Ministry, the Dean of Students Office, the Counseling Center, or the Office for Compliance and Personnel Services.

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

Credit Hour Policy

The unit of semester credit is defined as university-level credit that is awarded for the completion of coursework. One credit hour reflects the amount of work represented in the intended learning outcomes and verified by evidence of student achievement for those learning outcomes. Each credit hour earned at Chaminade University should result in 45 hours of engagement. This equates to one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester, 10-week term, or equivalent amount of work over a different amount of time. Direct instructor engagement and out-of-class work result in total student engagement time of 45 hours for one credit.

The minimum 45 hours of engagement per credit hour can be satisfied in fully online, internship, or other specialized courses through several means, including (a) regular online instruction or interaction with the faculty member and fellow students and (b) academic engagement through extensive reading, research, online discussion, online quizzes or exams; instruction, collaborative group work, internships, laboratory work, practica, studio work, and preparation of papers, presentations, or other forms of assessment. This policy is in accordance with federal regulations and regional accrediting agencies.

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