



COLLEGE OF ART AND SCIENCES

School of Justice Studies

Department of Forensic Sciences and Technology

FS 471-01, Forensic Reconstruction

Eiben Hall 202, T Th 10:00-11:20 AM | Credits: 3 | Section: 1 | Term: Fall 2026

Instructor Information

Instructor	Carlos A. Gutiérrez Ayala, Ph.D.
	This class survey of scientific techniques applied to reconstruct cases or cold cases based on physical evidence and the information obtained during the investigation, to generate conclusions scientifically.
Email	Carlos.gutierrez@chaminade.edu
Phone	(808) 739 8352
Office Location	207A Eiben Hall
Office Hours	Mondays and Fridays 9:00 – 10:00AM Thursdays and Fridays 11:30AM – 12:30PM

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

School	School of Justice Studies, Department of Forensic Sciences and technology
Location	Eiben Hall 207
Phone	(808) 440 4204
Questions?	Contact your instructor or the School of Justice Studies

Course Description & Materials

Catalog Description

FS 471 Forensic Reconstruction (3)

Survey of scientific techniques applied to reconstruct cases or cold cases based on physical evidence and the information obtained during the investigation, to generate conclusions scientifically.

Pre-Requisites: EN-102, COM-101, FS-340, FS-455, **with a grade of "C" or better**, and Senior Standing.

Co-requisites: 471L.

Course Snapshot

Modality	Face-to-face
Meeting Location	Eiben Hall 202
Meeting Days/Times	T Th 10:00 am to 11:20 am
Time Allocation	This three-credit course requires 135 clock hours of students' engagement per the official CUH Credit Hour Policy. Students enrolled in this course are anticipated to spend 37.5 hours in class, 28 hours researching and writing the five-page essay, 16 hours studying for the midterm exams, and 10.5 hours studying for and taking the final exam. There will be an additional 43 hours of work required beyond what is listed here (course reading, homework assignments, etc.), averaging 2.9 hours each week.
Required Materials	1. Gardner R. M. and Bevel T. (2020) <i>Practical Crime Scene Analysis and Reconstruction</i>. CRC Press. Boca Raton, FL, USA. ISBN: 9781420065510 2. Walton R.H. (2017) <i>Cold Cases Homicides, Practical Investigative Techniques</i>. CRC Press., Boca Raton, FL, USA. ISBN: 9781482237900 CrimePad Software, Instructor will provide the information Pix4D App, Instructor will provide the information
Recommended Items	-Edward Robinson, <i>Crime Scene Photography</i>, 3rd Edition, Academic Press, 2016, ISBN: 9780128027646 -Spitz and Fisher, <i>Medicolegal Investigation of Death, Guidelines for the Application of Pathology to Crime Investigation</i>, Fifth Edition, Charles Thomas Publisher, 2020, ISBN 9780398093129. -W. Jerry Chisum and Brent E. Turvey, <i>Crime Reconstruction</i>, 2nd Edition, Academic Press, ISBN 9780123864604.

Canvas and Google Drive	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 introduce the use of physical evidence in 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)

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 introduce the use of physical evidence in the justice system.

Upon completion of the FS 340 course, the student will be able to:

1. Define the role of forensic science in criminal investigation.
2. Identify physical evidence and the information it can provide.
3. Describe quality assurance strategies in the forensic sciences, including the legal system, accreditation, and certification.
4. Describe acceptable professional conduct in the forensic sciences.

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.

Through this course, students will receive an education based on Marianist values, with strength in education and integral and quality formation. These are strong foundations for serving the community and being prepared to bring justice and peace to society.

Native Hawaiian Values

Education is central to both Marianist and Native Hawaiian culture — both seek transformative, value-centered learning that serves the marginalized. This is reflected in the ‘Ōlelo No‘eau (Hawaiian proverbs) below:

1. **Educate for Formation in Faith (Mana):** E ola au i ke akua (‘Ōlelo 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 (‘Ōlelo No‘eau 1200) — Recognize others, be recognized, help others, be helped.
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 Outcomes (if applicable)				

Attendance & In-Class Participation

Attendance Policy

Unless otherwise stated, classes are scheduled to meet in person between 10:30-11:20 AM on Mondays, Wednesdays, and Fridays in Eiben Hall room 201. Students will earn **points per class attendance** starting on August 31st, 2026. Please be aware that the total attendance points will be changed if a class period is cancelled due to extenuating circumstances (ex. Instructor illness, extreme weather).

Quick Reference — Absence Thresholds:

Excused Absence	An absence where the instructor was notified (preferably 24 hours prior to the course) and was due to a legitimate reason (ex. Illness, family emergency, accident). Please note that proof may be requested (ex. Doctor's note).
Unexcused Absence	An absence where the instructor was NOT notified and/or was due to an illegitimate or unacceptable reason.
Grade Penalty	Unexcused absences will result in a loss of attendance-points for a given lecture. <i>Four or more unexcused absences will result in an additional 10% deduction from the student's final grade.</i>
Late Arrival / Early Departure	If a student is late by 5-10 minutes, they will lose 5-attendance points. If they are more than 10 minutes late, they will lose all 15 attendance points for that lecture (unless a legitimate reason is provided).

In-Class Participation Expectations

Active, respectful engagement is essential. Students are expected to come prepared and contribute meaningfully to discussions, activities, and collaborative work.

Students are expected to:

- Come prepared — complete readings and activities before each session.
- Participate actively in discussions and group work, demonstrating critical thinking.
- Engage respectfully and honor diverse perspectives.
- Use personal devices for course purposes only unless otherwise directed.
- Submit work by established deadlines to support course pacing.

Course Activities (880 points)

Participation (100 Points)	Active participation (100 points) Students are expected to actively listen, think and critique during oral presentations. To encourage this, students will be required to participate during questions periods by either: 1. Asking a relevant question 2. Providing constructive criticism or feedback 3. Sharing additional thoughts or knowledge Students will be required to do one above at least three (3) times throughout the semester.
Examinations (500 points)	• <u>Individual case presentation (50 points)</u>: You are required to choose a cold case and, using your knowledge, present possible

	solutions or new approaches to solving the case. For this individual case analysis, you are required to present it in a 5-to 10-minute presentation. • <u>Group case presentation (50 points)</u>: With your Forensic Reconstruction Team (FS471L), you are required to conduct a case analysis and deliver a 5 to 10-minute oral presentation. This should be based on the application of the PHD ETDC methodology. • <u>Midterm Exams (200 points)</u>: You are required to complete <i>two midterm</i> exams and one final exam. These exams are modelled after forensic science certification and accreditation exams (multiple-choice, true/false, and short-answer essays). Each midterm exam is worth 100 points. - <u>Final Exam (200 points)</u>: The final exam is an <i>oral exam</i> worth 200 points. <i>Unexcused missed presentations or exams will receive a grade of 0 points.</i>
Attendance (280 points)	Classes are scheduled to meet in person every Tuesday and Thursday unless indicated otherwise. You will earn 10 points per class attended starting Tuesday, 25 August. Please be aware that the total attendance points will change if a class period is canceled due to illness, weather, or another reason. If you miss an exam and your absence is considered unexcused, you will be given a 0 point for attendance <i>and</i> for the exam.

Course Policies

Late Work	Assigned presentation dates cannot be missed. If an unforeseen circumstance causes you to miss your date, please contact your instructor as soon as possible in order to discuss potential rescheduling.
Make-Up Work & Extra Credit	If you require make-up or extra credit work, please discuss this with your instructor at least one month before finals week (December 7-10th, 2026). No additional assignment will be given for unexcused absences or lack of interest/participation in the course.

Final Grades

Presentation, Participation, and Attendance grades will be entered in Canvas at most 1 week after their due date. You are encouraged to regularly consult your grades in Canvas throughout the semester, and to reach out to your instructor to discuss your progress and performance. Final grades will be submitted to Self-Service (selfservice.chaminade.edu).

Grade	Range	Points
A	90% and above	880 – 792
B	80–89%	791 – 633
C	70–79%	632 – 442
D	60–69%	441 – 265
F	59% and below	< 264

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, plagiarism, **and unauthorized and/or undisclosed AI usage**, in addition to more obvious dishonesty. See catalog section *Student Use of Artificial Intelligence in Academic Work* for further information.

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

AI (Artificial Intelligence) Statement

Chaminade University recognizes the increasing role of artificial intelligence (AI) technologies in academic and professional environments. AI encompasses, but is not limited to, generative AI platforms, automated writing or content generation software, coding assistants, and similar tools. Students must ensure all submitted work genuinely reflects their knowledge and effort. Using AI to produce or significantly complete graded assignments, exams or other academic tasks – defined as use that substitutes for or substantially replaces a student’s own

analysis, reasoning or written expression – without explicit instructor approval is considered academic misconduct and will be dealt with according to the University's Academic Honesty Policy.

If an instructor has reasonable grounds to question whether submitted work genuinely reflects a student's own knowledge, authorship, or mastery of course material — or whether it meets the course's expectations for AI use — the instructor may require the student to provide additional or alternative evidence of authorship and content mastery. Such evidence may include drafts, notes, revision history, source materials, process explanations, oral discussion, in class work, or completion of an alternative assessment. A student's refusal or inability to provide such evidence may be considered, along with other available information, in evaluating whether the work meets course requirements and stated learning outcomes. Instructors will not rely solely on AI detection software or other automated tools in making grading or academic integrity determinations. Such determinations will be based on the totality of the available information and handled in accordance with applicable University policies and procedures. See the catalog section *Student Use of Artificial Intelligence in Academic Work* for further information.

Title IX and Nondiscrimination

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.

Contact information and reporting options: chaminade.edu/titleix/nondiscrimination/. File a report via the [Campus Incident Report Form](#).

Nondiscrimination Policy and 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](#).

Student with Disabilities Statement- Kōkua 'Ike

Accessibility Services recognizes disability as a valued aspect of diversity and ensures equal access to the educational environment in accordance with Section 504 of the Rehabilitation Act; the Americans with Disabilities Act, as amended; and the principles and professional standards of the Association on Higher Education and Disability. Access is supported through reasonable accommodations and referrals to campus and community resources.

Appointments with the Accessibility Services Coordinator are available through Stellic at <https://chaminade.stellic.com> and may be held virtually or in person. Drop-in appointments are also welcome.

Students seeking support must meet with the Accessibility Services Coordinator as early as possible, even if they are unsure whether they have appropriate documentation of their disability or its impacts. The Accessibility Services Coordinator prioritizes listening to students's experiences and will discuss any documentation needs during the initial intake meeting. Students may seek support at any time.

Learn more at <https://chaminade.edu/ada-accommodations>

Assessment of Student Work

Chaminade University may use student work anonymously to assess achievement of course, program, and institutional learning outcomes as part of ongoing quality improvement efforts.

United Nations Sustainable Development Goals "SDG"



This course covers the UN *SDG 16: "Peace, 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.

Campus Resources & Support Services

The following resources are available to all Chaminade students. Reach out early — these services exist to support your success.

Resource	Description	Contact / Website
Accessibility Services (Kōkua 'Ike)	Accommodations under Section 504 and ADA. Contact early — appointments via Stellic, virtual or in person.	ada@chaminade.edu chaminade.edu/ada-accommodations
Tutoring & Academic Coaching (Kōkua 'Ike)	Tutoring and Academic Coaching Services support students' progression toward their academic, personal, and professional goals with clarity and intention. Services include individualized support in English, math, nursing, sciences, and social sciences, as well as guidance in developing goals and study strategies.	chaminade.edu/tutoring-academic-coaching-services
Career Services	Career Services supports students throughout their career journeys. Services include individualized job search strategy coaching, resume reviews, job interview coaching, and access to career-related resources and opportunities.	chaminade.edu/career-services
Basic Needs Resources	Support for food insecurity, housing instability, and other basic needs.	chaminade.edu/basic-needs/
Title IX / Nondiscrimination	Reporting and support for sex discrimination and gender-based violence. Campus Incident Report Form available online.	chaminade.edu/titleix/resources-and-support/

Resource	Description	Contact / Website
Hazing Prevention	Confidential support, crisis intervention, and reporting for any type of abuse including hazing.	hazingpreventionnetwork.org/athlete-helpline/
Campus Safety & SafeSwords	Security escort service for anyone who feels unsafe walking alone on campus at any time of day. Call security and a professional will escort you to your destination.	chaminade.edu/student-life/security/campus-safeswords-program/
CUH Alert Emergency Notification	Emergency text system. Register your cell number via the Chaminade portal and confirm the text to complete enrollment.	chaminade.edu

Weekly Course Schedule

Note: The instructor reserves the right to modify this schedule. Changes will be announced in class and posted to Canvas.

Week	Date	Book/Chapter	Topics / Activity	Notes / Reminders
1	Aug 18		Syllabus Review Orientation & Roster Review, Introduction	Welcome Aug 17-25 Add/Drop period
1	Aug 20	1/1	Introduction, History of the Crime Scene Processing	-Chose a Cold Case/missing case for presentation.
2	Aug 25	1/2 2/18-19	-The cold case problem -Technology in Forensic Reconstruction (CODIS, AFIS, NIBIN/IBIS, GPR, ALS, STK, SUPERSPECTRAL)	
2	Aug 27		Individual Case Presentation	
3	Sep 1	1/2	Theoretical and practical consideration for implementing crime scene analysis	
3	Sep 3	1/3	Methodology for Crime Scene Reconstruction "PHD ETDC"	

Week	Date	Book/ Chapter	Topics / Activity	Notes / Reminders
4	Sep 8	1/9	-Writing Crime Scene Reconstruction Reports	
4	Sep 10	2/4-5	-Investigation -Long-Term Missing-Persons and No-Body Cold Case Investigation	
5	Sep 15	1/4	Resolving Significant Investigative Questions in CRS I	
5	Sep 22	1/4	Resolving Significant Investigative Questions in CRS II	
6	Sep 17		1st Midterm Exam	
6	Sep 24	1/5	Understanding Crime Scene Protocols and Their Effect on Reconstruction	
7	Sep 29	1/7	Shooting Scene Processing and Reconstruction I	
7	Oct 1		Team Case Presentation	
8	Oct 6		Documentary Analysis part 1	The Judge and the General
8	Oct 8		Documentary Analysis part 2	The Judge and the General
9	Oct 13		NO CLASS	SNSM Activity (Oct 14th), Wellness week
9	Oct 15		NO CLASS	Wellness week
10	Oct 20	1/8	The Forensic Pathologist, the Body, and Crime Scene Reconstruction I	
10	Oct 22	1/8	The Forensic Pathologist, the Body, and Crime Scene Reconstruction II	
11	Oct 27	2/20-21	Forensic Anthropology and Forensic Dentistry in Cold Cases I	Spring Semester registration 90+ complete credits and students athletes (2027 SP)
11	Oct 29	2/20-21	Forensic Anthropology and Forensic Dentistry in Cold Cases II	- Spring Semester registration 60+

Week	Date	Book/ Chapter	Topics / Activity	Notes / Reminders
				complete credits (2027 SP) - Oct 29 th : Spring Semester registration 30+ complete credits and students athletes (2027 SP) -Oct 30 th , Spring Semester registration for all students (2027 SP)
12	Nov 3		Identification process in mass disasters, 6 th Biggest Earthquake and Tsunami experience.	
12	Nov 5		2nd Midterm Exam	
13	Nov 10		Forensic Exhumation	
13	Nov 12	2/12	Bloodstain Pattern Analysis to Crime Scene Reconstruction	
14	Nov 17	2/12	The Media in Cold Case Investigation	
14	Nov 19	1/10	Arguments and Ethics	
15	Nov 24	1/11	-Court Room Expert Testimony	https://www.court tv.com/title/murdaugh-family-murders-automotive-forensic-expert-testifies/
15	Nov 26		Holiday: Nov 26-27 Thanksgiving	No classes
16	Dec 1		The Relationship with the Family of the Victim	
16	Dec 3		Final Exam review	Mandatory attendance
17	Dec 10		Final FS 471 Exam	11 am to 1 pm