

Spring 2024

## FRSC 307-002: Crime Science Investigation & Lab

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**FRSC 307-002: Crime Scene  
Investigation & Lab  
T 8:30AM-12:50PM  
(TIER 209)  
Th 8:30-10:25pm (KUPF 210)  
Spring 2024 Course  
Syllabus**

[NJIT Academic Integrity Code](#): All Students should be aware that the Department of Chemistry & Environmental Science (CES) takes the University Code on Academic Integrity at NJIT very seriously and enforces it strictly. This means that there must not be any forms of plagiarism, i.e., copying of homework, class projects, or lab assignments, or any form of cheating in quizzes and exams. Under the University Code on Academic Integrity, students are obligated to report any such activities to the Instructor.

## COURSE INFORMATION

**Course Description:** This course gives an overview of the cardinal principles and techniques of crime scene investigation, with an emphasis on a rigorous scientific approach. Students will be introduced to: crime scene documentation, sketches, and photography; specialized techniques for the recognition and enhancement of physical evidence; preparation and maintenance of case folders for records including notes, sketches, photographs, and contacts/communications; communication of results and preparation of formal reports; and ethics and bias in crime scene investigation. The primary aim of the course is to introduce students to scientific philosophy, integrity, CSI procedures, and the role of the crime scene investigator.

**Number of Credits:** 4

**Prerequisites:** FRSC 201

**Course-Section and Instructor**

Course-Section	Instructor
FRSC 307-002	Dr. Kevin Parmelee
T 8:30-12:50am (TIER 209)	Office: Tiernan 323A
Th 8:30-10:25pm (KUPF 210)	Office Hours: By appointment C:908-420-1102
	email: parmelee@njit.edu

**Required Textbook:**

<b>Title</b>	Techniques of Crime Scene Investigation, 9 <sup>th</sup> ed.
<b>Author</b>	Barry Fisher & David Fisher
<b>Edition</b>	9
<b>Publisher</b>	CRC
<b>ISBN #</b>	978-1498758130

and additional readings as assigned.

**University-wide Withdrawal Date:** The last day to withdraw with a **W** is Monday, April 1, 2024. It will be strictly enforced.

**Learning Outcomes:** Upon completion of this course, students will:

- Apply crime scene procedures and techniques to reveal physical evidence.
- Use the appropriate techniques to document the crime scene (notes, sketches, 3D scans, photography and video).
- Recognize, enhance, document, collect, handle, and package physical evidence using field-specific techniques.
- Maintain chain of custody.
- Identify and describe common field tests for the presumptive identification and enhancement of different types of physical evidence.
- Effectively utilize cutting edge technologies and equipment such as: Faro Scanning station, Fuji IR/UV cameras, CSIPix software, Canon R5C Stereoscopic 180VR camera, and much more.
- Reconstruct a crime scene, including basic bloodstain pattern analysis and shooting scene trajectory analysis.
- Organize management of a crime scene, including allocation of personnel, resources, and time.
- Code of ethics for CSI's.
- Articulate the necessity of ethics in forensics and CSI and the potential ethical problems.
- Evaluate the physical evidence for a criminal investigation in terms of its significance.
- Identify applications of scientific investigative methods when examining crime scenes and physical evidence.
- Describe how science is used in the criminal justice system.
- Be able to testify in a clear and unbiased manner as to your findings at a crime scene under both direct and cross examination

## **POLICIES**

All CES students must familiarize themselves with, and adhere to, all official university-wide student policies. CES takes these policies very seriously and enforces them strictly.

**Grading Policy:** The final grade in this course will be determined as follows:

<b>Lab safety and cleanliness</b>	10%
<b>Class Participation</b>	10%
<b>Active learning &amp; Lab exercises</b>	30%
<b>Midterm Exam</b>	20%
<b>Final Exam</b>	30%

Extra Credit will be given for attending NJIAI, NEAFS, or EAS

1% per day

**Late assignments:** will be deducted 25% (from the 100% max) for each day late, commencing at 00:00hrs following the due day, and each subsequent day until the potential score is zero.

Your final letter grade in this course will be based on the following grading scale:

A	90-100	C	70-76
B+	87-89	D	60-69
B	80-86	F	<60
C+	77-79		

**Attendance Policy:** Attendance at classes will be recorded and is **mandatory**. Each class is a learning experience that cannot be replicated through simply “getting the notes.” After two unexcused absences, each subsequent absence will result in your class participation score being lowered by one percentage point. You are expected to read the relevant chapter and/or reading assignment prior to the lecture. Students who participate in lecture will receive points towards their class participation grade.

**Active Learning:** These student activities will be labeled “A.L.” on the Course Outline below. These activities are designed for the students to work together toward a common goal. The activities will include Case Studies & group Lab activities. Case studies, the students will participate in groups to utilize critical thinking skills to evaluate a real crime scene investigation and debate issues with other groups. Group lab activities, the students will participate in groups to work a moot crime scene or related activities. The main topic of the case/lab will focus on the topic of the day and students will be required to evaluate and/or grade the work of other students.

**Survey:** Toward the completion of the course a survey will be provided to students in which the active learning activities will be evaluated. The survey will then be shared with the students and later used to provide a report or presentation to ITE regarding challenges or accomplishments

**Exams:** There will be one midterm exam held in class during the semester and one comprehensive final exam. The following exam periods are tentative and therefore possibly subject to change:

Midterm Exam	March 7, 2024 (in class)
Final Exam Period	Final Exam Week (Date TBD)

The final exam will test your knowledge of all the course material taught in the entire course.

**Makeup Exam Policy:** There will normally be **NO MAKE-UP QUIZZES OR EXAMS** during the semester. In the event that a student has a legitimate reason for missing a quiz or exam, the student should contact the Dean of Students office and present written verifiable proof of the reason for missing the exam, e.g., a doctor’s note, police report, court notice, etc. clearly stating the date AND time of the mitigating problem. The student must also notify the CES Department Office/Instructor that the exam will be missed so that appropriate steps can be taken to make up the grade.

**Class Recordings:** Class sessions may be recorded by the instructor. These recordings shall only be used as an educational resource and are not to be distributed or used outside of this class. Information on how to access recorded lectures will be made available by your instructor. Any recordings that contain identifiable information about students will not be used beyond this semester.

**Class Recording Etiquette:** Students are expected to respect their fellow students’ privacy and freedom to learn

without disruption. Students are not allowed to capture or reproduce anyone's name, image, or voice without permission. They must be polite and respectful in the online chat. Informal chat is okay, but typing is restricted to things that one would say out loud in front of the entire class. Students must always conduct themselves on their webcam video as they would in person in a classroom.

**Cellular Phones:** All cellular phones and other electronic devices must be switched off during all class times. Such devices must be turned in during exams.

## ADDITIONAL RESOURCES

**Accommodation of Disabilities:** Office of Accessibility Resources and Services (*formerly known as Disability Support Services*) offers long term and temporary accommodations for undergraduate, graduate and visiting students at NJIT.

If you are in need of accommodations due to a disability please contact Chantonette Lyles, Associate Director at the Office of Accessibility Resources and Services at **973-596-5417** or via email at [lyles@njit.edu](mailto:lyles@njit.edu). The office is located in Fenster Hall Room 260. A Letter of Accommodation Eligibility from the Office of Accessibility Resources Services office authorizing your accommodations will be required.

For further information regarding self-identification, the submission of medical documentation and additional support services provided please visit the Accessibility Resources and Services (OARS) website at:

- <http://www5.njit.edu/studentssuccess/disability-support-services/>

### Important Dates:

Date	Day	Event
Jan 16	Tu	First Day of Classes
Jan 22	M	Last Day to Add/Drop Classes
March 10-16	Sun-Sat	Spring Break
April 1	M	Last Day to Withdraw
April 30	Tu	Friday Classes meet
April 30	Tu	Last Day of Classes
May 1-2	Wed-Th	Reading Days
May 3-9	F-Th	Final Exam Period
May 10		NJAFS Conference

## Course Outline

Week	Date	Topic	Assignment
1	Jan 16	Intro to CSI; Quality Assurance / ISO 17020; Lab check in	Sign lab safety; buy PPE; Ch 1
	Jan 18	First Officer at the Scene; The CSI; Specialized Personnel	Read Ch 2, (A.L. Group case study)
2	Jan 23	Exercise 1 Crime Scene Prioritization (on canvas)	(A.L. Group case study)
	Jan 25	Processing the Crime Scene & Basic Photography (Fuji)	Read Ch 3, (A.L. Group case study)
3	Jan 30	Evidence collection & Moot Crime Scenes in groups	AL Group Lab 1; NJSP Evidence Manual
	Feb 1	Scene Sketch; Note taking; Forensic Photography (Fuji)	Read Ch 7, (A.L. Group case study)
4	Feb 6	Scene Sketch; Note taking; Forensic Photography (Fuji)	AL Group Lab 2
	Feb 8	Establishing Identity (Fuji/CSIPix)	Read Ch 8, (A.L. Group case study)

	Feb 15	AAFS Annual Scientific Meeting (Faro, Fuji, CSIPIX, Lidar)	<a href="https://www.aafs.org//">https://www.aafs.org//</a>
6	Feb 20	Developing Latent Fingerprints (Fuji/CSIPIX)	Lab 3
	Feb 22	Blood, Forensic Biology, and DNA (Fuji)	Read Ch 10, (A.L. Group case study)
7	Feb 27	Trace Evidence lab	Read Ch9, (A.L. Group case study)
	Feb 29	Trace evidence / BPA	Lab 4
8	March 5	Blood Spatter Lab Part I (Fuji)	Lab 5; Ch 11, (A.L. Group case study)
	March 7	Midterm	
9	March 12	SPRING BREAK	
	March 14	SPRING BREAK	
10	March 19	Blood Spatter Lab Part II (Fuji)	AL Group Lab 11
	March 21	Impression Evidence	Read Ch 12, (A.L. Group case study)
11	March 26	Footwear and Tire Impression Lab (Fuji)	AL Group Lab 7
	March 28	Firearms Examination	Read Ch 13, (A.L. Group case study)
12	April 2	Bullet Trajectory Lab (Fuji/Faro)	AL Group Lab 8
	April 4	Motor Vehicle Examination	Read Ch 18, (A.L. Group case study)
13	April 9	Vehicle Lab (Meet at Summit Parking Deck)(Fuji/Faro)	AL Group Lab 9
	April 11	Burglary Investigation/Arson & Explosion	Read Ch 17, (A.L. Group case study)
14	April 16	Burglary Investigation Lab (Fuji/Faro)	AL Group Lab 10
	April 18	Visit to SCPO Crime Scene Unit	Read Ch 16
15	April 23	Homicide Investigation (Fuji/Faro)	Lab 11, (A.L. Group case study)
	April 25	Testifying on the stand; Ethics; and Professional Practice	Read Ch 3, (A.L. Group case study)
16	April 30	Review for Final; Last Day of class	Study for Final
	May 2	Reading Day	
	TBD	Final Exam	
5	Feb 13	AAFS Annual Scientific Meeting (Faro, Fuji, CSIPIX, Lidar)	Class meets unless attending conf.

*Updated by Kevin Parmelee - January 1, 2024  
Department of Chemistry & Environmental Sciences  
Course Syllabus, Spring 2024*

