CHSC 6a Summer 2025 Introduction to Forensic Science

Course Description

This course covers the fundamentals of crime scene investigation. Students will begin by learning the scientific method to evidence collection, followed by the examination and analysis of the evidence performed within a modern crime lab, and the use of scientific reasoning to interpret data. This course is designed to fulfill the natural science requirement for non-science majors.

Course Information

Course number: CHSC 6a

Lectures: T/W 9:00 AM – 11:30 AM over Zoom and Th 9:00 AM – 11: 30 AM at Volen Center 119

Course pre-requisites: None. This course is intended for students who have not received credit for CHEM 11a/b or CHEM 15 a/b at Brandeis.

Instructor: Jo-Ann Jee, Ph. D. | jjee@brandeis.edu | Edison-Lecks 115 | (781) 736-2554

Office hours: T/W/Th immediately after class or by appointment

Response time to e-mails: Expect an email response within 24 hours during the week and 48 hours over the weekends or breaks.

Class communication

All course updates will be communicated through Moodle. Please be sure to check all notifications coming from Moodle in a timely manner. Note that all forms of communication will be through the official Brandeis e-mail account.

Course materials

Required text: Saferstein, R. *Criminalistics: An Introduction to Forensic Science*, 13th ed.; Pearson, 2020. ISBN 9780137542512 (e-book), 9780135218310 (paper).

If you have difficulty purchasing course materials, please make an appointment with your Student Financial Services or Academic Services advisor to discuss possible funding options and alternative solutions.

Learning Goals

Upon the completion of the course, students should:

- Develop an understanding of the scientific principles of crime scene investigation and reconstruction, including evidence collection and preservation.
- Develop an understanding of forensic laboratory techniques and methodologies in the analysis of evidence.
- Develop the ability to effectively communicate research findings and engage in discussions about the scientific method.

- Recognize and appreciate the significance of collaboration between law enforcement, scientific experts, and legal practitioners.

Components of Course Work

Expectations of out-of-class work

Success in this four-credit course is based on the expectation that students will spend a minimum of 9 hours of study time per week in preparation for class.

Course expectations

This is a hybrid course. Students are expected to attend Tuesday & Wednesday sessions over Zoom, and in-person sessions on Thursdays. Students are responsible for active participation, for all material presented, and assignments. When submitting an assignment, students are responsible for submitting their work to the correct assignment on Moodle. Work submitted to the wrong assignment on Moodle will earn point deductions or may not earn any credit at all. Credit will not be awarded for assignments where the wrong document is submitted. Students are responsible for submitting their work on time. Late assignment submissions will not be accepted over email. Requests for extensions due to computer or internet issues will not be granted. Submissions that are late due to technical issues will receive the late submission penalty. All the submitted assignments/assessments should bear the students' name and handwritten documents must be legible and organized to be considered for credit.

Group work and collaboration are essential to your learning. That said, submitted assignments should be the result of each individual's effort unless stated otherwise by the course instructor. If you consult with other students on an assignment, report this in the work that you turn in. Instructors reserve the right to request an oral explanation of answers. If you have questions about what is permitted, please reach out to the instructor.

Forensic laboratory experiments

Hands-on laboratory experiments and activities will be performed intermittently throughout the semester during regularly scheduled Thursday lecture periods. Lab attendance is mandatory. Students are expected to arrive on time. If you are more than 20 minutes late, you will not be allowed to complete the experiment and will receive a 0 for all assignments associated with the lab experiment. Because significant preparation is necessary to set up each laboratory experiment, note that there is no opportunity to make-up missed laboratory experiments. Contact the course instructor at the start of the semester if you have a lab conflict due to religious observation. Lab conflicts for personal reasons such as travel, extracurriculars, or work will not be considered. If you are seriously ill and unable to attend a lab session, notify the course instructor prior to missing the lab. Failure to notify the instructor will result in a 0 for all assignments associated with the lab experiment. Review the lab schedule for the semester and plan accordingly.

Grading System

The grading system for this course is based primarily on the completion of each assignment. The homework, quizzes and final project will be graded based on a scale of Outstanding (O), Satisfactory (S), and Unsatisfactory (U). A minimum grade of Satisfactory (S) is required in order to receive credit for an assignment. Students may submit revisions up to a week after the assignment has been returned. See the Revision section for expectations. The course is comprised of the following assignments:

i. **Homework:** Homework assignments designed to prepare students for lectures/labs and provide additional practice on the concepts learned in lectures & labs. Homework assignments may consist of readings, podcasts, written assignments, pre- and post-laboratory assignments, discussion boards, and contributions to shared documents. A score of Outstanding (O) can only be earned for on-time submissions. Every student gets 1, no questions asked, 24-hour extension on a homework assignment during the semester. For the single extension to apply, students must send the request for the extension to the course instructor, prior to the assignment deadline. The extension is only for homework assignments and does not apply to final project assignments.

ii. **Quizzes:** During the semester, there will be three scheduled quizzes: **July 17th, July 31st, and August 7th**. Students should inform the instructor if there is a conflict with the scheduled quizzes. A score of Outstanding (O) cannot be earned for make-up quizzes.

iii. **Final project:** Students will work in a group to conduct research on a forensic case of interest and share their findings with the class through a mini podcast. Students will submit a bibliography and audio draft during the semester for feedback, and to ensure that everyone remains on track prior to the submission of the final podcast. A score of Outstanding (O) can only be earned for on-time submissions. Additional details on the final project will be available on Moodle.

Grades are assigned as the highest grade level in which all the criteria are met.

Letter grade scale:

Grade/ Assignment	**Homework**	**Quizzes**	**Final project**
A	5/5 complete with a score of O on at least 1	3/3 complete with a score of O on at least 1	Complete all assignments with a score of O on at least 2
B	5/5 complete	3/3 complete	Complete all assignments with a score of O on at least 1
C	4/5 complete	2/3 complete	Complete all assignments
D	3/5 complete	1/3 complete	1/3
E	Fewer than 3 complete	Fewer than 1 complete	Incomplete

Active engagement: Includes attendance, participation during lectures/labs, discussions, and contribution to written format (classwork, discussion board, peer-review, work distribution form, polls, etc.). Active engagement will determine a + or – designation to the base course grade. The table below indicates how engagement credits are earned/lost.

Engagement credit	**Course activity**
+1 credit per class	Attendance and participation in lectures and labs
+1 credit per assignment	Completing classwork, polls, discussion boards, and work distribution forms
+1 credit per evaluation	Submitting a peer-evaluation on another groups mini podcast
-0.5 credit per class	More than 10 minutes late to class
-1 credit per occurrence	Inappropriate or disruptive classroom conduct (bullying, intimidation, etc.)

The + or – grade designations are assigned according to the table below. The total number of credits available will depend on the number of classes and written format assignments held across the semester. Revisions do not apply towards active engagement.

Grade designation	**Credit requirements**
Plus (+)	≥ 90% engagement credits earned
Base	80-89.99% engagement credits earned
Minus (-)	< 80.00% engagement credits earned

Course Policies

Revisions

Students may submit revisions up to a week after the assignment has been returned. If the revision meets expectations, credit will be granted in the form of a Satisfactory (S) grade. A grade of Outstanding (O) can only be earned on the first on-time submission. Revisions for assignments will not be accepted after the last day of class.

Regrades

If you suspect that there was an error in grading, you may request a regrade within one week of the document being returned. Requests made more than one week after the document is returned will not be honored. To request a regrade, email the instructor with a description of the error and reasoning. Keep in mind that all students are given the benefit of doubt in determining the "correctness" of an answer to any question. The instructor is more likely to award more credit than an answer is worth, than to award less credit. During a regrade, the entire document will be reviewed and the grade on the assignment may increase, decrease, or remain unchanged.

Academic honesty

You are expected to be familiar with, and to follow, the University's policies on academic integrity. You are expected to be honest in all of your academic work. Please consult Brandeis University Rights and Responsibilities for all policies and procedures related to academic integrity. Allegations of alleged academic dishonesty will be forwarded to Student Rights and Community Standards. Sanctions for academic dishonesty can include failing grades and/or suspension from the university. Citation and research assistance can be found on the university library website.

Academic accommodations

Brandeis seeks to create a learning environment that is welcoming and inclusive of all students, and I want to support you in your learning. If you think you may require disability accommodations, you will need to work with Student Accessibility Support (SAS). You can contact them at 781-736-3470, email them at access@brandeis.edu, or visit the Student Accessibility Support home page. You can find helpful student FAQs and other resources on the SAS website, including guidance on how to know whether you might be eligible for support from SAS.

If you already have an accommodation letter from SAS, please provide the instructor with a copy to ensure effective implementation of accommodations for this class. In order to coordinate testing accommodation, the accommodation letter needs to be provided to the instructor at least 48 hours before the assessment.

Absences

Absence due to illness, death in the family, or religious holidays will be dealt with on a case-by-case basis if communicated to the instructor prior to the start of the assessment. Documentation of the absence may be requested. If a student is late to an assessment, no provisions for extra time are allowed.

Please review the course schedule on Moodle and notify the course instructor immediately of any conflicts including religious observance. Visit the Office of the University Registrar website on religious observance for additional information. Conflicts for personal reasons such as travel, extracurriculars, or work will not be considered.

Inclement weather

Regular class and lab sessions will occur as scheduled unless the university is officially closed due to inclement weather. In the event of university closure, in-person lectures and labs will be cancelled for that day. Any changes to the class schedule will be communicated via Moodle. Since assignments are turned in online, all assignments are still due at the originally scheduled time even if a class is canceled.

Respectful environment

Brandeis University is committed to providing its students, faculty, and staff with an environment conducive to learning and working, where all people are treated with respect and dignity. Please refrain from any behavior toward members of our Brandeis community, including students, faculty, staff, and guests, that intimidates, threatens, harasses, or bullies.

Laptop computer and cell phone use

Access to a laptop, tablet, or cell phone capable of accessing and completing tasks in Moodle, Echo360, Zoom, Microsoft Office, and G-Suite will be required.

AI generative tools

It is important to remember that chatGPT and other AI tools are not a replacement for your own critical thinking and original ideas. The ultimate goal of this course and any tool used to submit work is to enhance your own learning and understanding, not to undermine it.

As a college student, it is your responsibility to maintain the highest standards of academic integrity. Representing work generated by artificial intelligence as one's own work is considered to be academically dishonest. It is your responsibility to ensure that all work submitted for grades is your own original work. Use of AI tools are permitted only with permission from the instructor. Properly cite any sources that you use including material generated by an AI program. The instructor reserves the right to request an oral explanation of answers. If you have questions about what is permitted, please reach out to the instructor.

Student Support

Success in this course depends heavily on your personal health and well-being. Recognize that stress is an expected part of the college experience, and it often can be compounded by unexpected setbacks or life changes outside the classroom. Reflect on your role in taking care of yourself throughout the academic year. Know that you can always reach out to the instructor if you have any questions or concerns. For additional information, visit *Student Support* .

The instructor reserves the right to make changes and adjustments to this syllabus as necessary.

Tentative Course Schedule

Date	Topic	Notes
7/8 – 7/10	• Syllabus and course introduction • Saferstein Chapter 1 *Introduction* • Saferstein Chapter 2 *The Crime Scene* • Saferstein Chapter 3 *Physical Evidence*	7/10 SIMS Podcasting Session I
7/15 – 7/17	• Saferstein Chapter 6 *Fingerprints* • Saferstein Chapter 9 *Firearms, Toolmarks, and Other Impressions*	7/17 Fingerprint lab & **Quiz 1**
7/22 – 7/24	• Saferstein Chapter 9 *Firearms, Toolmarks, and Other Impressions* • Saferstein Chapter 10 *Matter, Light, and Glass examination*	7/24 Microscope lab & SIMS Podcasting Session II
7/29 – 7/31	• Saferstein Chapter 4 *Crime Scene Reconstruction: Bloodstain Pattern Analysis* • Saferstein Chapter 16 DNA: *The Indispensable Forensic Science Tool*	7/31 Density, blood spatter lab & **Quiz 2**
8/5 – 8/7	• Saferstein Chapter 16 DNA: *The Indispensable Forensic Science Tool* • Saferstein Chapter 12 *Drugs*	8/7 Mini podcast, peer evaluations, & **Quiz 3**

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