

JOHN JAY COLLEGE OF CRIMINAL JUSTICE
The City University of New York

Forensic Science 108 Syllabus

City University of New York - John Jay College of Criminal Justice
524 West 59th Street, New York, NY, 10019

Forensic Science 108: Sections 13, 14, 15, 16

Professor: Jennifer Leonard

Office: 03.62 J

Office hours: M/W 1:30-2:40 and *BY APPOINTMENT!*

E-mail address: jleonard@jjay.cuny.edu

Course description

This course provides the non-science major with an introduction to forensic science. The lecture portion of the course establishes a foundation for understanding many of the concepts and techniques on which forensic science is built, such as those associated with crimes scene processing, physical evidence, microscopy, fingerprints, firearms and DNA. The laboratory portion of the course provides an opportunity to learn “hands-on” by using common analytical techniques.

Learning outcomes

- Determine appropriate conclusions based on scientific evidence. Be able propose a prediction of results and then test predictions.
- Write scientific reports and follow scientific procedures to obtain standardized replicable results. Identify unknown samples in double blind studies.
- Apply critical thinking skills in solving justice problems of a specific nature by discussing relevant court cases and the impact of science within.
- Discriminate between generally accepted science and science fiction.
- Learn how to draw appropriate scientific conclusions from evidence and experimental data in both research and legal settings.
- Describe how science is used in the criminal justice system.
- Knowledge:
 - Take a skeptic approach to general scientific information and legal decisions.
 - Describe how data influences legal decisions and shapes methods of analysis.

- Gain an introduction to physical sciences necessary for forensic science.
- Students will learn aspects of general chemistry, analytical chemistry (chromatography), and biology (serology).

Practical Skills:

- Write scientific reports, and follow scientific procedures to obtain standardized replicable results.
- Identify unknown samples in double blind studies.
- Describe how science is used in the criminal justice system

Communication:

- Report on importance/impact, relevancy and accuracy of forensic science methods.
- Use scientific vocabulary in defending results and active discussions about science.

Course pre-requisites or co-requisites

Prerequisite: Natural science 107. Unless you have fulfilled certain high school science requirements, you will not be permitted to take this course without having taken natural science 107.

Requirements

- Quizzes may be given at any point during the semester and may be unannounced. Quizzes will be given during the first ten minutes of the lecture session. If you are late you will not be allowed to take the quiz. There are no make-up quizzes.
- Attendance is required for both lecture and laboratory sections. **A total of four or more unexcused absences will adversely affect your grade.** Students are responsible for **legibly** signing the attendance sheet and will be considered absent if they do not. Students are required to observe **all** safety rules, including wearing safety glasses during lab work and cleanup. Students without safety glasses will be barred from the lab for that period and will receive an absent mark. . Whoever has not expressed attendance within the first 15 min or arrives later will be counted as late. **Two** lateness marks will equal **one** absence. Students arriving late must contact the instructor at the end of the session **before** leaving the lab.
- Cell/Smart phone usage is not permitted in lab or lecture and must be turned off or placed

on silent (not vibrate). Texting or messaging during class is strictly forbidden. During an exam the usage of a cell phone or texting will result in a zero for that exam. If the student needs to use the phone they can leave the room. If caught using the phone in the room the student will be asked to leave to room and upon multiple infractions may be barred from the class for that session and marked absent. (We would not have this rule if it were not needed)

- We cannot guarantee any makeup exams or labs.
- Proper laboratory attire is mandatory. Deviation from the guidelines presented in the safety list will lead to a dismissal from the period and a mark of absent.
- **Failure to possess and wear lab goggles is inexcusable. Goggles are mandatory for all lab sessions including recitations! The minimum penalty for not having or wearing your goggles is a zero for the lab and dismissal from the period with a marked absence**
- Students are required to address their professors and each other with respect. This applies to in and outside of the classroom and also in electronic communications.

Lecture Exams: The four lecture exams will NOT be cumulative. You must bring your JJC ID card in order to take each exam. You will not be permitted to take an exam if you arrive more than 15 minutes after the exam has begun. Bring a #2 pencil, an eraser and a pen to each exam. **NO MAKE-UP EXAMS WILL BE GIVEN.** During examinations, students may not use any extraneous reference materials (e.g. books, notes, papers), communicate with other students, or use electronic devices such as phones, pagers, or PDA's. Any student caught cheating will receive a zero for the exam, and be referred to the College's Academic Integrity Officer for further action. **YOU MUST TAKE ALL FOUR EXAMS!**

Lab Reports: During the course of the semester you are required to prepare one lab report on one of the labs in the class. The report must be typed and reflect your experimentation in FOS108 lab. If the paper is not handed in one time, it is at the discretion of the lab instructor to allow the acceptance of the report, and/or point penalization.

Required Texts

Criminalistics-An Introduction to Forensic Science, 9th Edition.

By Richard Saferstein, Prince Hall, Inc, New Jersey.

Custom Edition for John Jay College of Criminal Justice

Suggested: Investigating Chemistry: A Forensic Science Perspective 3rd Edition

By: Matthew Johll, W.H. Freeman & Company. ISBN: 1429255226

Lab Manual: FOS 108 – Forensic Science 108 Laboratory Manual

Custom edition for John Jay College of Criminal Justice

Marble notebook, with bound pages, needed for lab.

Grading

- You lecture grade is worth 60% of your course grade and laboratory is worth 40%. Quizzes, exams, attendance and participation all take part of your grade.
- The lecture grade will be the average of the exam grades from the semester, and attendance and participation will be taken into account!
- The lab grade will consist of lab notebooks (30%), general unknowns (40%), enhanced lab report (15%), and final exam (15%).

College wide policies for undergraduate courses (see the *Undergraduate Bulletin*, Chapter IV Academic Standards)

- A. Incomplete Grade Policy**
- B. Extra Work During the Semester**
- C. Americans with Disabilities Act (ADA) Policies**

“Qualified students with disabilities will be provided reasonable academic accommodations if determined eligible by the Office of Accessibility Services (OAS). Prior to granting disability accommodations in this course, the instructor must receive written verification of a student’s eligibility from the OAS which is located at L66 in the new building (212-237-8031). It is the student’s responsibility to initiate contact with the office and to follow the established procedures for having the accommodation notice sent to the instructor.”

Source: *Reasonable Accommodations: A Faculty Guide to Teaching College Students with Disabilities*, 4th ed., City University of New York, p.3.

(http://www.jjay.cuny.edu/studentlife/Reasonable_Accommodations.pdf)

Statement of the College Policy on Plagiarism

Plagiarism is the presentation of someone else's ideas, words, or artistic, scientific, or technical work as one's own creation. Using the ideas or work of another is permissible only when the original author is identified. Paraphrasing and summarizing, as well as direct quotations require citations to the original source.

Plagiarism may be intentional or unintentional. Lack of dishonest intent does not necessarily absolve a student of responsibility for plagiarism. It is the student's responsibility to recognize the difference between statements that are common knowledge (which do not require documentation) and restatements of the ideas of others.

Paraphrase, summary, and direct quotation are acceptable forms of restatement, as long as the source is cited. Students who are unsure how and when to provide documentation are advised to consult with their instructors. The Library has free guides designed to help students with problems of documentation. (*John Jay College of Criminal Justice Undergraduate Bulletin*, <http://www.jjay.cuny.edu/academics/654.php> , see Chapter IV Academic Standards)

Course Calendar

The following schedule is *subject to change* at the discretion of the professors.
 You are responsible for reading text and preparing for laboratory before the class period.

Weekday	Date	Lecture Topics	Lab
Monday	27-Aug-12	Introduction/Math Refresher	Introduction/Math Refresher/ Documentation
Wednesday	29-Aug-12	Forensic Science, Evidence Collection & Preservation	Documentation Practice Chemistry Recitation
Monday	3-Sep-12	NO CLASS	NO CLASS
Wednesday	5-Sep-12	Introduction to Forensic Chemistry	Identification/Individualization
Monday	10-Sep-12	Chromatography	Identification/Individualization Chromatography Recitation
Wednesday	12-Sep-12	Light and Matter	Chromatography Lab
Monday	17-Sep-12	NO CLASS	NO CLASS
Wednesday	19-Sep-12	Microscopy	Chromatography Lab
Monday	24-Sep-12	REVIEW	Chromatography Lab/Microscopy Recitation
Wednesday	26-Sep-12	NO CLASS	NO CLASS
Monday	1-Oct-12	EXAM 1	Microscopy Lab
Wednesday	3-Oct-12	Hairs and Fibers	Microscopy Lab/Hairs and Fibers Recitation
Monday	8-Oct-12	NO CLASS	NO CLASS
Wednesday	10-Oct-12	Toxicology (Chemical Equilibrium & Poisons)	Hairs and Fibers Lab
Monday	15-Oct-12	Drugs (Chemistry, Structure)	Hairs and Fibers Lab
Wednesday	17-Oct-12	Pathology/Odontology	Hairs and Fibers Lab
Monday	22-Oct-12	Anthropology/Entomology	Trace Lab
Wednesday	24-Oct-12	Serology	Serology Recitation & Lab
Monday	29-Oct-12	Intro to Biochemistry and DNA Analysis	Serology Lab
Wednesday	31-Oct-12	REVIEW	Fingerprint Recitation & Lab
Monday	5-Nov-12	EXAM 2	Fingerprint Lab
Wednesday	7-Nov-12	Fingerprints	Fingerprint Lab
Monday	12-Nov-12	Questioned Documents	Forgery Detection Recitation & Lab
Wednesday	14-Nov-12	Firearms I	Ballistics Recitation & Lab LAB REPORT DUE
Monday	19-Nov-12	Firearms II, Toolmarks	Odontology Lab
Wednesday	21-Nov-12	Toolmarks, Impressions and Paint	Crime Scene
Monday	26-Nov-12	REVIEW	Crime Scene
Wednesday	28-Nov-12	EXAM 3	Review/General Unks
Monday	3-Dec-12	Chemistry of Fire and Heat (Arson Investigations)	General Unknowns
Wednesday	5-Dec-12	Chemistry of Explosions	General Unknowns
Monday	10-Dec-12	Nuclear Chemistry – Energy, Medicine, Weapons	LAB FINAL EXAM
Wednesday	12-Dec-12	Glass and Soil, REVIEW	General Unknown, Wrap-Up

Approved by College Council, November 18, 2011

Monday	17-Dec-12	Finals Week	Finals Week
Wednesday	19-Dec-12	Finals Week	Finals Week