CSI:Hunter (Forensic Biology) Biol 15000- Fall 2018

PROFESSORS

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Lab instructors

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Reading(s):

1) We are using Open Education Resource (OER) Texts that have been edited and modified for this course. Readings are available on Bb.

2) Class attendance and participation may be graded. A free audience response system (such as Pingo or Goformative, etc.) will be utilized during class time. Please bring a device that can be connected remotely or through Hunter's wifi to every class.

3) The material that you will be responsible for in this course will be provided for you on Bb. It is your responsibility to regularly check and thoroughly review for understanding the materials provided for you.

LAB MANUAL: Will be given during laboratory sessions or posted on Bb. It is your responsibility to collect your lab materials and record data into a 1-2" notebook/binder for grading.

Current topics: a short article/movie will be assigned for class/group discussion regarding "The CSI Effect" and/or the Central Park Five case, current understanding of forensic biology, or a current forensic biology topic in the media. Speakers from relevant fields will be invited to speak to the course regarding their experience and the relationship of biology and/or forensics. Timing subject to change. Check syllabus regularly.

COURSE DESCRIPTION

CSI: Hunter is an introductory laboratory course for non-biology majors. This lecture/laboratory course will cover the techniques used by forensic scientists to analyze a crime scene, and the biological concepts behind them. Through the topics that are covered, you will understand how biological evidence like fingerprints, blood, and DNA are collected, analyzed, and presented as evidence to solve crimes.

The credits from this course will not count towards credits required for the Biology Major. Students who successfully complete the course will receive 4.5 credits towards Hunter College's Stage 2/E (Broad Exposure: Natural Science) or LiPS (Life and Physical Sciences).

COURSE POINT BREAKDOWN

Lecture Exams (1-4)	=	80 pts each (best 3 of 4) 240 points total
Lecture Attendance / Participation	=	60 pts
Lab quizzes (weekly)	=	100 pts
Lab Notebook	=	25 pts
Lab Exam / Practical	=	25 pts
Lab Presentation	=	50 pts

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500 pts

Laboratory attendance is mandatory. If you miss a laboratory session, your total lab score will be reduced as follows: 1 absence= (total lab score) will be multiplied by 0.9. Two absences = (total lab score) will be multiplied by 0.8. Three absences = (total lab score) will be multiplied by 0.7, etc. If you are more than 20 minutes late, it will count as an absence- no exceptions. You will be able to take the laboratory quiz at the discretion of your instructor. Each laboratory quiz is worth 10 points. There will a comprehensive "open book" lab exam worth 25 points given during part of a laboratory session.

Laboratory Notebook: On the last day of laboratory or weekly (at the discretion of the instructor), each student is expected to turn in completed laboratory manual or weekly exercises. It will be graded on completeness: including all lab components are included and properly labeled, all questions in the introduction, data/results, and interpretations are answered. These components should be completed each week during your laboratory session.

Laboratory Presentation: Groups of 2-3 students (at the discretion of your instructor) will give a presentation during the last lab meeting. This presentation will be based on an actual crime scene investigation/ trial previously approved by your lab instructor. In this PowerPoint presentation, I would like students to use

materials learned in lecture and laboratory plus information from the internet (properly cited, of course) to explain a case, some of the evidence (including biological background), and the results. Later in the semester, students will be given a more detailed outline of points and ideas for the presentation.

Tests:
Tests will cover the material found in OER text and supplemental topics discussed during class. You are responsible for any relevant material from lecture, posted BlackBoard items, and guest lectures. There will be 4 tests each worth 80 points. You are responsible for understanding/using material that may have been introduced from previous exams. The lowest grade of the 4 tests will not be counted in your final grade calculation. Identification (Valid Student ID) is necessary at the time of each exam. No make-up exams will be given.

Attendance and Participation will be assessed as a tool for classroom participation, attendance, and extra credit. You must set up an identifier (name) to receive credit. This technology may require on-line polling and use of a smart phone, tablet, or computer. If you do not have any of these devices, please go to the Hunter Main Library for options to borrow a device during class periods.

Cheating:
Any sign of cheating (including plagiarism and copying) will result in immediate failure of the quiz, test, report, or presentation and will not be dropped. If you cut and paste/ copy words for use in any essay or presentation, this is considered plagiarism.

Academic Integrity Statement: "Hunter College regards acts of academic dishonesty (e.g. plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures."

Syllabus: Syllabus is a guideline of what will be covered and subject to change at the discretion of the instructor. You are responsible for any changes or materials covered in class. Please refer to Bb regularly.

Lecture Calendar

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Lect	Date	Day	Topics	Readings
1	8/28	T	Introduction Course/Biology Definition/ Scope of Forensic Science	Module 1
2	8/30	R	Forensic Science and History	Module 1
3	9/4	T	History/Crime Scene Investigation	Module 1
4	9/6	R	Chemistry and toxicology	Module 2
	9/11	T	No classes scheduled	
5	9/13	R	Guest Speaker- OCME internship	Module 2
	9/18	T	No classes scheduled	
6	9/20	R	Exam 1*	
7	9/25	T	Introduction to Biology-Biomolecules	Module 3
8	9/27	R	Cellular Structure / Death of Cells	Module 3
9	10/02	T	Forensic Death- Timing, Causes and Manner	Module 4
10	10/04	R	Body Systems: Integumentary- Skin/ Hair/Fingerprints	Module 4
11	10/9	T	Body Systems: Skeletal/Forensic Anthropology	Module 4
12	10/11	R	Catch-up/possible speaker	
13	10/16	T	Exam 2*	
14	10/18	R	DNA Structure and Replication	Module 6
15	10/23	T	DNA: STRs and inheritance	Module 6
16	10/25	R	Invited Speaker: OCME, Trace DNA	Material presented will be on Exam
17	10/30	T	DNA- genetics and biotechnology	Module 6
18	11/1	R	Invited Speaker: Innocence Project	Material presented will be on Exam
19	11/6	T	DNA review/catch-up DNA and detection	Module 6 *Last day to withdraw with a grade of W*
20	11/8	R	DNA review and Case Study	Module 6
21	11/13	T	Exam 3*	
22	11/15	R	Blood	Module 7
23	11/20	T	Blood	Module 7
	11/22	R	Thanksgiving Recess (NO CLASS)	
24	11/27	T	Semen/Sexual Assault	Module 8
25	11/29	R	Invited speaker: NYPD- SVU	Material presented will be on Exam
26	12/4	T	Serology	Module 8
27	12/6	R	Invited speaker: FBI	Material presented will be on Exam
28	12/11	T	Review/Catch-up	Module 7/8
			Finals Week Exam 4* @ 1:45pm	(not comprehensive)

***Lowest exam grade will be dropped. There are no makeup exams**

Note: Lecture and Lab calendars are subject to change, check Bb frequently for updates

• Identify and apply the fundamental concepts and methods of a life or physical science.
• Apply the scientific method to explore natural phenomena, including hypothesis development, observation, experimentation, measurement, data analysis, and data presentation.
• Use the tools of a scientific discipline to carry out collaborative laboratory investigations.
• Gather, analyze, and interpret data and present it in an effective written laboratory or fieldwork report.
• Identify and apply research ethics and unbiased assessment in gathering and reporting scientific data.