

Bioethics in the 21st Century
Philosophy 80G / Biomolecular Engineering 80G Summer 2016

Instructor:

Office hours TBA but can also be made by appointment for TAs and Instructors.

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Teaching Assistants:

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Course Goals & Structure: *Bioethics in the 21st Century* aims to give students a rigorous foundation for understanding the scientific and ethical issues raised by biotechnology. This course is designed to meet general education requirements, and will serve both science majors and non-science majors at all levels of experience.

Required Readings:

Rachels, James; *The Elements of Moral Philosophy*, 6th or 7th Ed. (EMP)

Skloot, Rebecca; *The Immortal Life of Henrietta Lacks* (ILHL)

Weston, Anthony; *A Rulebook for Arguments*, 4th Ed. (RA)

eCommons Online Readings and Multimedia Assigned Regularly

The books are available at the UCSC bookstore and are all available as ebooks and some are available as audiobooks (ILHL). Additional required readings and multimedia materials will be distributed or linked to via eCommons.

eCommons: The day-to-day functioning of this course will rely heavily on eCommons (www.ecommons.ucsc.edu), including the schedule of speakers, downloading required and suggested readings or online videos and distribution of the weekly assignments. eCommons can be accessed at the above address or via your my.ucsc.edu page. You must check eCommons regularly for new assignments and course information, meaning at least before each class. You may also need to print some readings in order to discuss them closely in class or in section.

If you have any trouble with eCommons, you are expected to ask for help from your instructor, TA, and/or campus technical support. Please note that in order for eCommons to function, your web browser must be supported and configured correctly, instructions for which are available at the above site. If you are already enrolled, eCommons will recognize you as such. If you are wait-listed or adding to the class, send an email to Dr. Dreisbach to be added as an auditor until you become officially enrolled.

Top Hat: We will be using the Top Hat (www.tophat.com) classroom response system in class and outside of class. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or via text message (SMS).

You can visit <http://tinyurl.com/THStudentRegistration> for the Student Quick Start Guide which outlines how you will register for a Top Hat account, as well as providing a brief overview to get you up and running on the system. You can register by visiting our direct Top Hat course URL tophat.com/e/514080. Top Hat will require a subscription. There are three options to choose from: \$24 for 4 months of unlimited access, \$36 for 12 months of unlimited access or \$72 for lifetime access.

Disability Resource Center: If you qualify for classroom accommodations because of a disability, please submit your Accommodation Authorization from the Disability Resource Center (DRC) to one of the instructors in a timely manner, preferably within the first two weeks of the quarter. Contact the DRC at 459-2089 (voice), 459-4806 (TTY).

Counseling and Psychological Services: All currently enrolled undergraduate and graduate students at the University of California at Santa Cruz are eligible to utilize on-campus counseling services. Situational and developmental problems frequently interfere with academic performance. Please make use of the campus resources available to support you. Services are confidential (831) 459-2628.
<http://caps.ucsc.edu/counseling/index.html>

Academic Misconduct: By enrolling in the University, students are automatically agreeing to abide by University policies, including those on academic misconduct. Academic integrity and scholarship are core values that should guide our conduct and decisions as members of the UCSC community. Plagiarism and cheating contradict these values, and as such are very serious academic offenses. Penalties can include a failing grade in an assignment or in the course, and/or suspension or expulsion from the university. Students are expected to familiarize themselves with and follow citation practices. The instructor in this course will pursue disciplinary action in all instances of academic misconduct.

Student Evaluation:

13% Attendance and Participation (All class activities combined)

5% Connect Modules

25% FINAL EXAM

40% SHORT ASSIGNMENTS (Four Assignments, 10% Each)

12% QUIZZES (Top Four out of Six Quizzes, 3% Each)

5% Class DEBATES

Attendance and Participation: Students are expected to attend and participate in class activities either in person or online. Attendance and participation will be primarily measured through the use of the Top Hat class response system via regular in-class attendance check-ins, participation in online questions and discussion. Optional section participation and group work will also count towards this grade. Discussion grades will be assigned based on attendance record and quality of participation.

Final Exam: The Final Exam will be part multiple-choice and part short-essays and/or long-essays. You will need to bring a Scantron and Blue Book for the Final Exam. Absence from the Final Exam will be granted for medical or family emergencies only. An incomplete grade or an opportunity to make-up the points will be assigned to the student at the instructor's discretion. Excused absences will not be granted for non-emergency reasons.

Short Assignments: Each student is responsible for FOUR essays out of at least NINE paper topics. Mostly short 2-3 page essays, due at the very beginning of class by 9:05 AM. The new topic assignments will be posted each week on eCommons a week prior to the due date. Do not come to class late and expect to turn in your assignment. Assignments will NOT be accepted late NO EXCEPTIONS. If you run into serious last minute problems or are ill, you can email your assignment to your TA BEFORE the 9:05 AM deadline but you must still submit a hard copy to your TA as well before our next class meeting. Students can ONLY hand in four assignments.

Quizzes: Four quizzes will be given on eCommons and Two In-Class throughout the term and can be on assigned class readings due that day, class lecture, or on the last guest lecturer. Online quizzes are open book, very short (10 questions max), and can be a mix of multiple choice, matching, short answer or true/false. In-Class quizzes are closed book. Only THREE eCommons and ONE In Class quiz will count towards course grade and your lowest quiz score will be dropped. Online quizzes will be available for 24 hours once released, in-class quizzes are only in class and there are no quiz make-ups. Since lowest quiz score is dropped, if you miss or experience technical difficulties with one quiz, that quiz will be the selected as the dropped quiz score.

Overview of Course Schedule and Topics

*****Final Readings, Speakers, Topics and Order are all subject to change due to the nature of having several guest speakers for the course.*****

Currently planned guest lectures this term by topic:

HeLa Cells / Environment and GMOs (David Bernick)
Neanderthal Genomics (Ed Green)
DNA Forensics / Scientific Misconduct (Mark Akeson)
Ethical Research (Logan Mulroney)
iGem Research and GMOs (iGem Team)
GMO Concerns (Greenpeace)
Dual-use Research and Bioterrorism (Rebecca DuBois)

Week 1:

Introduction to Bioethics and Ethical Theory
Guest Lecture: Mark Akeson on Scientific Misconduct

Week 2:

Guest Lectures: iGem team on project and GMO overview; Greenpeace on GMO Concerns; DuBois on Dual-Use Research and Bioterrorism
Assignments 1 DUE
Finish Rachels book

Week 3:

Guest Lecture: Bernick on HeLa
Assignments 2 DUE
Finish Henrietta Lacks book

Week 4:

Guest Lecture: Mark Akeson DNA Forensics
Assignments 3 DUE

Week 5:

Class Debates
Final Exam
Assignments 4 DUE