

Chapman University
Controversial Topics in Biology Hon 383-01

Instructor: Dr. Zeynep Akyol Ataman
Lecture: TuTh 10:00AM - 11:15AM
Classroom: Argyros Seminar Room 205
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Office: HSC 10
Office hours: By appointment.
FINAL: Monday, May 15, 10:45-1:15 AM-PM

Embryonic stem cells, evolution, designer babies, cloning, genetically modified crops, global warming, marijuana, antibiotic usage in animals, homosexuality and more topics like these have been at the center of scientific controversies for many years. People sometimes reject these because of our religious/social beliefs or economical reasons. Many times we reject things simply because we are afraid of what we do not understand. These all beg the questions such as; Is there a communication gap between the scientists and the rest of us? How can we feel more confident talking about topics that create controversy? How do we make sure we understand fully the issues that affect our health and our environment?

This class is designed to talk about the controversies that were generated by biological advances in a discussion-based environment. We will be looking at the opposing schools of thought on these hot issues, understand all sides and we will try to form our own opinions.

Blackboard: Blackboard will be used to post announcements, additional resources, assignments, etc. Also you can follow your up-to-date grades here.

Course Description: An introduction to advanced-level critical inquiry, focusing on basic understanding of biological principles and how they are depicted in news and media

Credits: 3 units

Course Disclosure: The material covered and media screened for this course may at times elicit emotional responses. Some topics covered will include watching R-rated movies, discussions on religious beliefs, sexual orientation, animal cruelty and addiction.

GE 7NI Learning Outcome (Natural Science Inquiry):

Students will be able to use scientific principles and reasoning as a way of knowing the natural world, distinguishing science from non-science.

Course Learning Objectives:

- * Apply the scientific method to analyze the natural world.
- * Explain the difference between a scientific theory and “theories” in everyday life.
- * Evaluate the science supporting scientific concepts and compare them to how they are

depicted in media.

- * Analyze and articulate the controversies surrounding certain scientific topics.
- * Analyze how media contribute to the public's perception of scientific advances.

GE 7VI Learning Outcome (Values Inquiry):

Articulates how values and ethics inform human understanding, structures, and behavior

Course Learning Objectives:

- * Explore and assess the values and ethical norms and how they influence scientific advances.
- * Analyze why so many Americans don't "believe" in certain concepts that are supported by scientific studies.
- * Evaluate the options the difference between science and pseudo-science.

Honors Program Learning Outcomes:

Upon completing a course in the University Honors Program students will have:

1. Obtained a starting point for integrative exploration of the development of cultures and intellectual achievements through a variety of disciplinary and interdisciplinary perspectives;
2. Sharpened their ability to critically analyze and synthesize a broad range of knowledge through the study of primary texts and through engagement in active learning with fellow students, faculty, and texts (broadly understood);
3. Understood how to apply more integrative and interdisciplinary forms of understanding in the advancement of knowledge and in addressing complex challenges shaping the world; Developed effective communication skills, specifically in the areas of written and oral exposition and analysis

Course Objectives:

Students will obtain a basic understanding of some simple and complex biological concepts such as DNA, antibiotic resistance, genetic modification of organisms, stem cells, evolution,

Students will learn read understand and explain opposing arguments on controversies around biological topics.

Students will learn to participate in discussions.

Students will learn to write reports and prepare presentations on specific topics.

Students will learn to critically analyze a scientific paper.

Classroom conduct:

Cell phones are to be off during **ALL** class lectures.

Laptops are **ONLY** allowed during presentations.

If you are late to class or leave early, please minimize noise.

Civility is expected of all class participants at all times both in and out of the classroom. This includes use of appropriate behavior and language that is respectful to other individuals in the classroom.

Instructional strategies:

This is a class in which you must show up every day because you will be required to participate during the lectures and take pre-lecture quizzes. The class will involve in class exercises, discussions and presentations as well as guest speakers. Some activities may be scheduled outside the set class time.

Methods of Evaluation:

There will be no exams in this class. The grading will be as follows:

Attendance and quizzes, 20% of the overall grade,

Presentations, 25% of the overall grade,

Written reports and homework, 25% of the overall grade,

Final project, 30 % of the final grade

I will be adjusting the final grades according to your class participation.

Chapman University Academic Integrity Policy: Chapman University is a community of scholars, which emphasizes the mutual responsibility of all members to seek knowledge honestly and in good faith. Students are responsible for doing their own work, and academic dishonesty of any kind will not be tolerated anywhere in the university.

Students with disabilities policy: In compliance with ADA guidelines, students who have any condition, either permanent or temporary, that might affect their ability to perform in this class are encouraged to inform the instructor at the beginning of the term. The University, through the Center for Academic Success, will work with the appropriate faculty member who is asked to provide the accommodations for a student in determining what accommodations are suitable based on the documentation and the individual student needs. The granting of any accommodation will not be retroactive and cannot jeopardize the academic standards or integrity of the course.

Equity and Diversity: Chapman University is committed to ensuring equality and valuing diversity. Students and professors are reminded to show respect at all times as outlined in Chapman’s harassment and Discrimination Policy:

<http://tinyurl.com/CUHarassment-Discrimination>

Any violations of this policy should be discussed with the professor, the Dean of Students, and/or otherwise in accordance with this policy.

Important Addresses and Telephone Numbers:

Disabilities Services:

410 N. Glassell

Phone: (714) 997-6778

Tutoring, Learning, and Testing Center:

Cecil B. DeMille Hall 130

Phone: (714) 997-6828

Course Grades (out of 1000 points)

Attendance	200 points
Presentations	250 points
Written reports and homework	250 points
Final Project	300 points

The orders of lectures are subject to change.

Week	Tue	Thursday
01/31	Course Introduction	Scientific Method and Critical Thinking
Health and Medicine		
02/7	Concussion, Chronic Cerebral Encephalopathy	Marijuana
02/14	Addiction	Vaccination
02/21	<i>-----Student Presentations----- (Health and Medicine)</i>	
Scientific Advances		
02/28	DNA	Cloning
03/07	Stem Cells	Stem Cells
03/14	GM Foods	GM Foods (Guest Speaker)
03/21	Spring Break	
03/28	<i>-----Student Presentations----- (Nobel Prize Winners)</i>	
Environmental Issues		
04/04	<i>Global Warming</i>	
04/11	Trash	E-Waste and recycling (Guest Speaker)
04/18	Extinction of wildlife, De-extinction (Jurassic Park)	How to Build a Dinosaur (Guest Speaker)
04/25	Deforestation and Emerging Viruses	Outbreak (Guest Speaker)
05/02	<i>-----Student Presentations----- (Environmental Issues)</i>	
05/09	Antibiotic Resistance	Last Day of Lecture

Accumulation of points:

- 925-1000= A;
- 895-924= A-;
- 870-894= B+;
- 825-869= B;
- 795-824=B-;
- 770-794=C+;
- 725-769=C;
- 695-724=C-;
- 670-694- D+;
- 625-669=D;
- 595-624=D-;
- 594 and below= F