

Chapman University
Biology In Media and Reality Hon 364-01

Instructor: Dr. Zeynep Akyol Ataman

Lecture: TuTh 8:30AM - 9:45AM

Classroom: Argyros Seminar Room 205

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Office: HSC 10

Office hours: By appointment.

Final: Friday, May 19, 10:45-1:15 AM-PM

Cellular phones and tablets enable us to access any information within a matter of seconds, but how do we know if the information that we are getting and eventually using is actually correct?

Every minute we are bombarded with news, blogs, petitions etc. that our friends and colleagues share on their social media platforms, but how do we know what we are reading is not biased, dated or simply wrong?

One of the best perks of living in the age of technological advances is that the movies and TV shows take full advantage of these technologies with visually stunning end results. While there are many films and shows that start with a relevant biological concept (i.e. cloning), in the end to increase the excitement factor, usually the scientific accuracy is sacrificed. So what are the most common biological concepts that are used in sci-fi films and shows? Why are we so fascinated with these biological topics? Can biology in real life catch up with the biology in movies?

This course is designed to ask the above questions and try to answer them in a discussion-based setting.

Course Objectives:

Students will obtain a basic understanding of cellular and molecular biology.

Students will learn to analyze and understand articles, social media posts, broadcasts or movies about recent biology related scientific news and advances.

Students will become familiar with common diseases, infectious agents, genetically modified organisms, stem cell research and cloning on a basic level.

Students will gain the ability to separate correct information from “junk information”.

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

Students will learn to critically analyze a scientific paper.

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.

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

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 social media and news.
- * 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

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 homeworks, 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 homeworks	250 points
Final Project	300 points

The orders of lectures are subject to change.

Week	Tue	Thr
01/31	Course Introduction	Scientific Method and Critical Thinking
Health and Medicine		
02/7	Scientific Method and Critical thinking (Lorenzo's Oil)	Scientific Method and Critical thinking (Lorenzo's Oil)
02/14	Legal and Illegal Drugs (Requiem for a Dream)	
02/21	-----Student Presentations-----	
Scientific Advances		
02/28	In Vitro Fertilization, Designer babies and three parent babies (My Sister's Keeper)	
03/07	DNA and Cloning (GATTACA)	
03/14	Genetically Modified Organisms	GMOs (Guest Speaker)
03/21	Spring Break	
Environmental Issues		
03/28	Student Presentations	
04/04	Human Impact on Environment (Wall E)	E-Waste (Guest Speaker)
04/11	<i>Plastic Paradise, Deforestation and Global Warming</i>	
04/18	Extinction of wildlife, De-extinction (Jurassic Park)	How to Build a Dinosaur (Guest Speaker)
04/25	Viruses and Viral Epidemics	Outbreak (Guest Speaker)
05/02	Student Presentations	
05/09	Biology in Social Media	

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