

UTEP Fall 2022 · Geology Through Film

SCI 1301 (CRN: 13610)

For Arts & Humanity Students

FILM 1390 (CRN: 11762)

For Math, Science & Eng. Students

Lecture room: Education Building 114

Time: Monday and Wednesday, 3:00-4-20PM

**Instructors: Antonio Arribas (Dept. of Earth, Environmental and Resource Sciences)
and Gregory Beam (Dept. of Communication)**

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Course Goals and Objectives

This course aims to achieve three objectives:

- i. introduce students to the fascinating principles of geology (earthquakes, volcanoes, plate tectonics, etc.)
- ii. enhance this knowledge by viewing exemplary films that feature, directly or indirectly, subjects related to geology and earth sciences; and
- iii. gain insight, through discussions of the viewings, into the art of the cinema.

For non-science majors, students will learn about the impact of Earth processes on our everyday life. You will leave this course with a basic understanding of the concepts and vocabulary of the geosciences and be exposed to how scientists approach a scientific problem (observe, question, and analyze), distinguish facts from interpretations, and assess sources of information.

Ultimately, the goal is for the students to become better informed citizens.

For science majors, this course will provide a basic literacy in the language of cinema and a comprehension of the discourse surrounding movies. In particular, you will be encouraged to reflect on the potential for a fruitful dialogue and relationship between science and the arts, scrutinizing how science is portrayed in popular media such as film, examining the role narrative plays in questioning the ethical concerns related to scientific inquiry, and asking how communication between the two disciplines might be improved to the benefit of both.

Science Learning Outcomes

Among other outcomes, at the end of the course students will:

- Understand the interrelationship between Earth processes and human development, including the location of the resources (minerals, energy, water) that enable society
- Understand plate tectonics and the concept of a dynamic planet
- Recognize various tectonic settings on Earth and predict the nature of seismic and volcanic activity at the different tectonic settings
- Understand the rock cycle, the water cycle, and the life cycle (evolution)

- Understand the difference between weather and climate, the basic controls on climate and climate change, and the science behind human-induced global warming
- Appreciate the immense variety of temporal and spatial scales involved

Film Learning Outcomes

Among other outcomes, at the end of the course students will:

- Possess an understanding of several core elements of cinematic art, including audio-visual composition, cinematography and editing, and narrative structure
- Understand how to view films with a sensitive and penetrating eye
- Have improved critical thinking and communication skills relating to the arts in general and film in particular
- See how film can be used as a potent tool for presenting information about science to a general audience
- Be able to scrutinize how the commercial aspects of the film industry influence film art
- Appreciate the important social and ethical implications of film production and spectatorship
- Observe how popular media influence our understanding of the natural world and our relationship to it

Course Format

This course will combine movie screenings with lectures on geology and the art of cinema. Given the length of some of the movies, the students will be required to complete part of the movie screenings outside the two scheduled weekly lectures. Partial movie screenings will be conducted in class, with students completing the viewings independently. All films will be made available to students on-line through Swank, Kanopy, and/or other digital platforms, with viewing links provided in Blackboard.

Textbook

No text is required. Supplemental material will be made available.

Grading

Subject to change, grading will be based on five evaluations or assessments (20% each): two exams or assignments each on Geology and Film topics plus a final student presentation.

Letter grade: A = 90-100, B=80 – 89.9, C = 70-79.9, D = 60-69.9, F = less than 60

CASS / Student Concerns / **LOOKING FOR A NOTE TAKER**

If you have a disability or if you are experiencing learning disabilities and need classroom accommodations, please contact the Center for Accommodations and Support Services (CASS)

at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Rm 106. For additional information, please visit www.sa.utep.edu/cass.

If you are struggling with this class or experiencing difficulties at the university, please reach out to your instructor or teaching assistant. If they are unable to help you, then please contact the Dean of Students Office at DOS@utep.edu or phone (915) 747-5648.

LOOKING FOR A NOTE TAKER

If you are a good note taker and are interested in earning a stipend of \$100 for being a Note-Taker for the semester, please log into <http://cassportal.utep.edu> to sign up. Help a fellow student in being successful at UTEP, do not forget to include your Note Taker assignment in your resume.

Schedule of Geoscience Topic and associated Movie Screening (subject to change)

Mineral Resources and Society; Origins of Geology as a Modern Science

– *2001 Space Odyssey* (1968)

Plate Tectonics

– *The Man Who Would Be King* (1975)

– *The Man Who Skied Down Everest* (1975)

Minerals and Rocks

– *Uncut Gems* (2019)

Magmas and Volcanoes

– *The Fire Within* (2022)

Geologic Time

– *Jurassic Park* (1993)

Earthquakes and Hazards

– *The Impossible* (2012)

Climate and Geology

– *Lawrence of Arabia* (1962)

Climate Change

– *Mad Max: Fury Road* (2015)

Water Resources

– *Chinatown* (1974)

Energy Resources

– *There Will Be Blood* (2007)

Mineral Resources, incl. Critical Minerals

– *The Treasure of Sierra Madre* (1948)

Calendar (subject to change)

Wk	Date	Movie Screening (to view independently ahead of week's classes)	Geology	Film	Assignments/Exams
1	8/22-24		Introduction	Introduction	
2	8/29-31	<i>2001 Space Odyssey (1968)</i>	Minerals & Society	A Brief History of Film	
3	9/5-7 9/5 = Labor Day, no class	<i>The Man Who Would be King (1975)</i>	Plate Tectonics	Classical Film Style	
4	9/12-14	<i>The Man Who Skied Down Everest (1975)</i>	Plate Tectonics	Reality & Fantasy	
5	9/19-21	<i>Uncut Gems (2019)</i>	Minerals and Rocks	Screenwriting & Narrative Structure	
6	9/26-28	<i>The Fire Within (2022)</i>	Magma and Volcanoes	Documentary Modes	
7	10/3-5	<i>Jurassic Park (1993)</i>	Geologic Time	The Business of Filmmaking	
8	10/10-12	<i>The Impossible (2012)</i>	Earthquakes and Hazards	Casting & Representation	Film Response 1
9	10/17-19		TBA	TBA	Geology Exam 1
10	10/24-26	<i>Lawrence of Arabia (1962)</i>	Climate and Geology	Cinematic Adaptations	
11	10/31, 11/2	<i>Mad Max: Fury Road (2015)</i>	Climate Change	World Building	
12	11/7-9	<i>Chinatown (1974)</i>	Water Resources	Screenwriting	
13	11/14-16	<i>There Will Be Blood (2007)</i>	Energy Resources	Characterization	
14	11/21-23	<i>The Treasure of Sierra Madre (1948)</i>	Mineral Resources	The Evolution of Film	Film Response 2, due Sunday, Nov. 27
15	11/28-30		TBA	TBA	Geology Exam 2
16	Final Exam Wk: Monday, 12/5, 12:00-2:45pm				Final Presentations