

# BIOL 3303:001 & MC1 SCIENCE IN CINEMA AND TV

## Spring 2020

Instructor: Dr. Christopher M. Ritzi. Rm 217, Tel. 837-8420 Email: [critzi@sulross.edu](mailto:critzi@sulross.edu)

Office Hours: MWF 11-11:50, TR 9-10:30 in Rm 217 or by appt.

Webpage: <http://sulross.blackboard.edu/> or <http://faculty.sulross.edu/critzi>

Textbook: None required, although internet and library access will be necessary

Classroom: Rm 101 Warnock Science Building (ALP), A06 Aaron Medical Building (MC), and personal computer via Lifesize

Time: Sections 001, MC1 Monday 6:00 – 9:00 pm

### Course Description:

The purpose of this course is to survey the presentation of science in media as presented in film and television. We will look at analyze the accuracy and inaccuracy of the science portrayed to the masses, and interpret whether this level of scientific knowledge is helpful or not to society. The areas of science we will examine will cover such disciplines as biology, physics, chemistry, geology, meteorology, forensics, biotechnology, archeology, paleontology, and others.

### Student Learning Objectives for a Student majoring in a BS in Biology include:

- SLO1 The student will be able to demonstrate an understanding of basic biological concepts, including but not limited to evolution via natural selection, cell theory, and the role and function of DNA.
- SLO2 The student will be able to demonstrate utilization of various field techniques toward addressing scientific questions in the specific discipline. These field techniques can include, but are not limited to, plant collection and processing, various animal collection techniques, ecological surveying and sampling, and biodiversity indexing.
- SLO3 The student will be able to use biological instrumentation to solve biological problems using standard observational strategies.
- SLO4 The student will develop writing skills by summarizing and critiquing recent relevant biological literature.

### Course Learning Objectives:

- 1) Students will investigate the scientific accuracy of media.
- 2) Students will discuss the impact of scientific inaccuracies on real world situations.
- 3) Students will diagnosis the validity of scientific concepts in the media, and explain fallacies.
- 4) Students will document and catalogue the extent of scientific modifications in media.

**Marketable Skills:** A student getting a degree in the Biological sciences would be expected to acquire the following marketable skills by graduation.

- 1) Students will be able to organize, analyze, and interpret data.
- 2) Students will be proficient at using presentation software.
- 3) Students will acquire experience in managing time and meeting deadlines.
- 4) Students will gain the ability to speak effectively and write concisely about scientific topics.
- 5) Students will acquire experience and guidance in the development of professional email correspondence.

### Grading:

Students are expected to attend all lectures and view video content in class. There are to be roughly 2 movies or programs per class period, and each week students will be required to submit a short (half page minimum) review of the scientific content of the film and the degree of accuracy involved. Additional, at the beginning of March, a midterm assignment covering scientific questions of interest will be due for 100 pts. Also, a final exam covering 5 different sources of media will be administered on-line on the date of the final for another 100 point. The rest of the points will be based on the media scientific summaries and attendance (300 points total).

**Suggestion:**

As per SRSU policy, students shall be dropped from the class with an F if they miss 20% (3 lectures) over the course of the semester. If you are unable to attend class, please notify me by either e-mail, phone, or in person so that you will not be unnecessarily dropped from the course. Due to the nature and time line of this course, attendance will be required and late work will not be accepted. Please do not miss class or plan on leaving part way into a session, as that will be counted as an absence.

**Lecture courtesy:** The general rules of classroom etiquette are below.

- 1) Please do not talk to others in class while the instructor is lecturing or a film is playing. If you have a question, ASK THE INSTRUCTOR! That's what I'm here for.
- 2) No eating, chewing, dipping, etc.
- 3) If you are going to attend class, please do so. Leaving and returning to class repeatedly is disruptive, as well as showing up after half the period is over.
- 4) Please turn cell phones and pagers to silent while in class. They are disruptive to the entire class, and distract others as well. Texting is also not allowed in class.

**Students with disabilities will be provided reasonable accommodations. If you would like to request such accommodations because of physical, mental, or learning disability, please contact the ADA Coordinator for Program Accessibility at 837-8203, FH 112.**

**Tentative Lecture Outline**

<b>Date</b>	<b>Lecture topic</b>
Jan 13	Introduction, Evolution, and Sharktopus (Over-the-Top Sci-Fi Day)
Jan 20	Martin Luther King, Jr. Holiday – No Class
Jan 27	SwampThing and The Ruins (Botany Day)
Feb 3	Andromedia Strain (Disease/Microbiology Day)
Feb 10	Contagion (Disease/Microbiology Day Continued)
Feb 17	Them and Wasp Woman (Entomology Day)
Feb 24	Day After Tomorrow (Environmental Day)
Mar 2	The Core (Environmental Day Continued) and Mid Term Due
Mar 9	Spring Break – No Class
Mar 16	San Andreas (Natural Disaster Day)
Mar 23	Volcano (Natural Disaster Day Continued)
Mar 30	The Cave and Resident Evil (Parasitic Mind Control Day)
Apr 6	The Monolith Monsters and The Fly (Horror Sci-Fi Day)
Apr 13	Fantastic Voyage and Andromedia 1:1 (Inner & Outer Space Travel Day)
Apr 20	Andromedia 1:2 and Serenity (Outer Space Travel Day)
Apr 27	Bones, Numbers, and CSI (Forensic Science Day)
May 1	Final Exam on Blackboard, complete by 8 pm

Note – This outline is subject to change for reasons of course interest, time constraint, or instructor whim. The exam will be administered on the dates given, unless material relevant for a given exam has not been covered. Under such cases, an exam may be moved a class period or two to aid in the clarity and understanding of the material.

### Paper requirements:

The papers you will be required to write for this class are listed below. All papers must be typed, spell checked, and formatted with 1 inch margins, double spaced, and 12 point Times New Roman Font. All assignments will be submitted through Safe Assign in Blackboard.

1) Midterm due before Midnight on March 2<sup>nd</sup>. Choose 2 of the 3 questions, answer on your word processor, and upload your answers to Blackboard. Each answer should be at least 3 pages and include citations and media references.

- 1) What are the ethical ramifications of genetic manipulation?
- 2) What are some of the consequences of our portrayal of DNA and scientific techniques in the judicial system?
- 3) How has the portrayal of science changed in movies and shows over the past 50 years? Has it become more realistic or fantastical?

2) Write a short summary of **ONE** of the films or series of shows viewed **each week**, detailing the science covered and its accuracy. Feel free to cite outside sources to back up your arguments, but the majority of the summary needs to be your own ideas and in your own words. If the program had any potential social or ethical impacts as a result of the science, please explain these as well. These short summaries (minimum half page) are to be submitted through Blackboard by the start of the next week's class each week. If you do not submit your summary by the start of class the following week, it will be counted late and not received.

Plagiarism Warning – There are lots of interesting sites on the internet that talk about and discuss films and TV. I expect you will be tempted to use these to help you complete your assignment, but you may not copy or plagiarize. If you copy and paste, or fail to cite sources when you should have, you will not receive credit for the assignment. Additionally, the failure to include your own interpretation of the films will also result in a failure of the assignment.

### Graduate or Honors Credit:

For those taking this course for either honors or graduate credit, an additional assignment will be required. You will be required to pick a specific scientific theme (zoology, botany, geology, genetics, etc.), and get the topic string approved prior to the midterm. Once approved, you need to watch 3 different films or 6 hours worth of television media dealing with your topic outside of class, and then write a summary of the scientific content covered and it's relevance to reality. Plan on writing at least a 5-10 page paper over your selected topic and discuss all relevant areas that can be addressed with the topic area. Please be broad and open minded in your interpretation.