

Syllabus

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Course Description

Astrobiology addresses three basic questions that have been asked in various ways for generations:

1. how does life begin and evolve
2. does life exist elsewhere in the universe
3. what is the future of life on Earth and beyond?

This large multidisciplinary introductory class delves into the origin of life in the universe and the quest for space exploration. The class will approach these topics through the lens of astronomy, biology, physics, geology, chemistry, philosophy and art. The class is intended to reach a general audience of various backgrounds. By exploring the planetary and physical conditions required for life to exist, students will learn about

1. *core science concepts such as the scientific method, length and time scales, evolution, and*
2. *how these ideas alter our perception of everyday life, popular culture and the art*

A fundamental aspect of this class is to explore the disciplinary perspective attached to the concept of extraterrestrial life and the evolution of this concept through time and space. This topic is a perfect medium to teach core concepts in science such as: scientific methodology, systems, evolution and scale and to link these concepts to philosophical, historical and sociological considerations.



Course Objectives

- We would like you to come away from this class understanding the fundamental theories of the origins of life.
- We would like you to appreciate the scale of the universe and our position in it. This includes both astronomical and biological length and time scales.
- We expect you to understand the physical and chemical controls on life on and outside of the Earth System
- We expect that you will be able to discuss cultural representations of extraterrestrial life and reflect on how those representations are used to navigate a variety of cultural fears and desires.
- Learn about the physical and technical challenges to explore our universe and interstellar travel.



Class Organization

To foster the transdisciplinary nature of the course and the topic, the course is organized around weekly “Guiding Questions.” Each of these questions will be explored in depth through the dual lens of science and the humanities. As such, different instructors will be leading the various lectures, with sometimes several instructors leading the same class at the same time. Along with traditional lectures, the class is also formatted for regular flipped classrooms, debates and guest lectures. Attendance will be assessed using iClickers



Assessment

There will not be traditional midterms in this class. Instead, you will receive weekly assignments related to the weekly topic. These assignments will vary in their format: some will be online quizzes; others will be blog discussions, summaries of reading, etc. In place of a final exam, students will complete a final project in the form of a poster conference (in groups of 5). Details on the assignment are given below. Overall the final grade will reflect an equal distribution between humanities and sciences related assessments. Assignments will always be given on Friday and will have to be completed within a week



Grading

Your final grade will be based on the following criteria:

- Weekly assessment (x14) 70%
 - Assigned every Friday and due the following Friday by beginning of class
 - No late assignments will be accepted – lowest score assignment will be dropped
- iClicker Reef participation 15%
 - Students may have up to 6 unexcused absences without affecting their grade
- Final Exam 15%
- Academic dishonesty will NOT be tolerated
 - Students with multiple iClickers in class will be reported to Center for Student Conduct
 - Plagiarism of weekly assignments and/or final project will also be reported

Course Policies

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Policies

Responsibility of the Student: Students are responsible for understanding the contents of the course and the course Blackboard Page (and for being able to use and navigate the course Blackboard Page), for understanding assignments, due dates and requirements. If there is any confusion or uncertainty, the student is responsible for seeking clarification from a Teaching Assistant or an instructor.

Classroom expectations: Students are expected to be in class and paying attention to the lecture or classroom activities; cell phone use is not allowed in the class and should be turned off during class; laptops may be used during class, but only for uses related to classroom learning or course material.

Attendance: Attendance will be recorded with Iclicker Reef activities. Students must have an Iclicker Reef in class (to begin second week). The lowest 6 Iclicker Reef grades will be dropped.

Code of Academic Integrity: Offenses against the Code of Academic Integrity are deemed serious and insult the integrity of the entire academic community. Any suspected violations of the Code are taken very seriously and will be forwarded to the Center for Student Ethics & Standards for further intervention. The Code can be found at <http://www.uvm.edu/policies/student/acadintegrity.pdf>.

Student Learning Accommodations: In keeping with University policy, any student with a documented disability interested in utilizing accommodations should contact ACCESS, the office of Disability Services on campus. ACCESS works with students and faculty in an interactive process to explore reasonable and appropriate accommodations via an accommodation letter to faculty with recommended accommodations as early as possible each semester.

Contact ACCESS: A170 Living/Learning Center; 802-656-7753; access@uvm.edu; www.uvm.edu/access

UVM's policy on disability certification and student support:
www.uvm.edu/~uvmppg/ppg/student/disability.pdf

Religious Holidays: Students have the right to practice the religion of their choice. If you need to miss class to observe a religious holiday, please submit the dates of your absence to me in writing by the end of the second full week of classes. You will be permitted to make up work within a mutually agreed-upon time.

Grade Appeals: If you would like to contest a grade, please follow the procedures outlined in this policy: <http://www.uvm.edu/~uvmppg/ppg/student/gradeappeals.pdf>

Grading: For information on grading and GPA calculation, go to www.uvm.edu/academics/catalogue and click on Policies for an A-Z listing.

Code of Student Rights and Responsibilities: www.uvm.edu/~uvmppg/ppg/student/studentcode.pdf

FERPA Rights Disclosure: The purpose of this policy is to communicate the rights of students regarding access to, and privacy of their student educational records as provided for in the Family Educational Rights and Privacy Act (FERPA) of 1974.

<http://www.uvm.edu/~uvmppg/ppg/student/ferpa.pdf>