

AST105 -T7 – Extraterrestrial Life

Fall 2006 Syllabus

Sundays at 5:30-8:00pm, in CH301

Instructor Erik Saperstein

Office CH355

Office Hours W, F 3:30 - 4:30pm; or by appointment

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Topics This is an introductory astronomy course that surveys the universe as a potential habitat for life. The survey is interdisciplinary, covering basic astronomy, astrophysics, biology, geology, and chemistry. Topics will include the nature and origins of life on Earth, possible niches for life in the Solar system, the habitability of other planetary systems, communication with intelligent extraterrestrial life, and the establishment of a galactic civilization. The topics will be investigated through application of the scientific method. At the conclusion of this course, students should have a more empirical appreciation for the possible ubiquity of life in the galactic ecology, and what our role in that ecology might be.

Text *Life in the Universe*, by Bennett, Shostak, and Jakosky

Attendance Attendance is strongly recommended but not mandatory. You will be responsible for the material discussed in the lecture, including material that is not in the text, but attendance by itself will not directly affect your grade.

Homework There will be a total of five homework assignments, one every three weeks. The homework will mostly test fundamental knowledge and, to a lesser extent, inclusive knowledge. The purpose of the homework is to prepare you for the quizzes by focusing on important information from the text.

Each assignment will consist of three short-answer questions concerning fundamentals – one question per chapter covered between quizzes – and one long-answer question that integrates the chapters into an inclusive whole. Inclusive questions will be worth twice as much as fundamental questions. Each question may have several parts.

Quizzes There will be a total of five quizzes, one every three weeks. The quizzes will mostly test extensive knowledge. All quizzes are closed-book. You will be given 30 minutes to complete a quiz.

Each quiz will contain three general questions – one per chapter covered since the last quiz – and two comprehensive questions that integrate the chapters into an inclusive whole. All questions will be long-answer and will contribute equally to the quiz grade. Each question may have several parts.

Final There will be one final exam at the end of the semester. The final will be comprehensive and closed-book. There will be five long-answer questions, each of which may cover several chapters at once. Each question may have several parts.

Make-ups Make-up quizzes will be given for pre-arranged absences, such as a school-related event, or for verifiable emergencies. Notify me as soon as possible, before or after the scheduled quiz date, to arrange a make-up date. Missed quizzes must be made-up within one week of the scheduled quiz date.

Homework assignments must be turned in early or on time. Homework assignments may be turned in late – within 3 days of the due-date – if there is a verifiable emergency.

Grades Your final grade will be determined from your homework, quiz, and final exam grades. The lowest quiz grade will be dropped. Note that the final is mandatory.

- 25% Homework (5 @ 5% each)
- 60% Quizzes (best four of five) (4 @ 15% each)
- 15% Final exam (1 @ 15% each)

Honesty Copying information from a book, web site, someone else's work, or any other source is considered *cheating*. Violations will be handled as stated in the UAB Academic Honor Code.

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Fall 2006 Course Schedule

1.	08/27	<i>Homework 1 assigned</i>	Chapter 1: A Universe of Life?
2.	09/03	<i>Homework 1 due</i>	Chapter 2: The Science of Life in the Universe
3.	09/10	Quiz 1	Chapter 3: The Nature of Life
4.	09/17	<i>Homework 2 assigned</i>	Chapter 4: The Geological History of Earth
5.	09/24	<i>Homework 2 due</i>	Chapter 5: Life on Earth
6.	10/01	Quiz 2	Chapter 6: Life in Our Solar System
7.	10/08	<i>Homework 3 assigned</i>	Chapter 7: Mars
8.	10/15	<i>Homework 3 due</i>	Chapter 8: Life on Jovian Moons
9.	10/22	Quiz 3	Chapter 9: Habitability of Worlds Last class before Withdrawl deadline (10/23)
10.	10/29	<i>Homework 4 assigned</i>	Chapter 10: The Search for Habitable Worlds
11.	11/05	<i>Homework 4 due</i>	Chapter 11: The Search for Extraterrestrial Intelligence
12.	11/12	Quiz 4 <i>Homework 5 assigned</i>	Chapter 12: Interstellar Travel
13.	11/19	<i>Homework 5 due</i>	Chapter 13: The Fermi Paradox Chapter 14: Contact – Implications of the Search and Discovery
	11/26	Thanksgiving Break	(No Class)
14.	12/03	Quiz 5	Review for Final Exam
	12/10	FINAL EXAM	Same time, same place