Physics 106, "Introduction to Astrobiology"- Spring 2026

General Information

Instructor: Mark Henriksen
Email: henrikse@umbc.edu
Office: Physics 414
Office hours: By appointment
Location: Fine Arts 006
Time: MWF 11:00 - 11:50 AM

Course description

The purpose of this course is to provide undergraduate students with a general background in astrobiology. Course content includes basic concepts in planetary science, chemistry, biology, astronomy, geology, and physics that are applicable to astrobiology. In particular, we address the origin and evolution of life on Earth and the possibility of extraterrestrial life and detecting its presence. This is a lively, broad field that you will be able to follow in the popular press after the course ends.

Grading procedure

Grades will be calculated using the following template: (1) two midterm exams – 20% each, (2) homework – 15%, (3) quizzes – 15%, (3) final exam – 30%.

Lectures and the Textbook

The lecture material amplifies and *adds to the content* in the textbook. We will cover all chapters in the textbook and students should read the textbook for the best experience.

Textbook: "Life in the Universe", Bennett and Shostak, 5th Edition, Pearson

Schedule of Exams

Midterm I: March 11
Midterm 2: April 27
Final Exam: TBD

Homework Assignments and Quizzes

Homework will be due on the dates specified. Homework consists of problems in Quick Quiz (QQ) and short essay questions. The QQ can be challenging and it is best to look up each question's relevant material in the textbook. Quizzes will reflect lecture material and will be given during a lecture.

1. Chapter 1 – 2/2
2. Chapter 2 – 2/9
3. Chapter 3 – 2/16
4. Chapter 4 – 2/23
5. Chapter 5 – 3/2
6. Chapter 6 – 3/9

Midterm 1 – 3/11 (Chapters 1 – 5)

7. Chapter 7 – 3/30
8. Chapter 8 – 4/6
9. Chapter 9 – 4/13
10. Chapter 10 – 4/20

11. Chapter 11 – 4/27

Midterm 2- 4/29 (Chapters 6 – 10)

12. Chapter 12 – 5/4

13. Chapters 13 – 5/11

Final Exam Date and Time is TBD (All chapters covered, 11 – 13, emphasized)

Achieving Course Goals and Meeting Academic Expectations

Students should attend lectures, complete all homework assignments, take all of the quizzes, and review for exams.

Policy on late homework, missed Exams, and Exams

"Late homework will not be accepted." Make up exams will not be possible.

Policy on Academic Integrity

"Academic integrity is an important value at UMBC. By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal." Academic integrity will be enforced.

Student Support /Disability Services

"UMBC is committed to eliminating discriminatory obstacles that may disadvantage students based on disability. Services for students with disabilities are provided for all students qualified under the Americans with Disabilities Act (ADA) of 1990, the ADAAA of 2009, and Section 504 of the Rehabilitation Act who

request and are eligible for accommodations. The Office of Student Disability Services (SDS) is the UMBC department designated to coordinate accommodations that would allow for students to have equal access and inclusion in all courses, programs, and activities at the University."