

AST 101 – Introduction to Astronomy –

SPRING 2024

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Course website: <http://www.lehman.edu/faculty/anchordoqui/101.html>

Texts: Lecture notes available in the course website

Lectures: Mondays and Wednesdays 12:00 – 13:15, Gillet 226. Lectures begin January 29, 2024

Office Hours: Mondays and Wednesdays 13:15 -13:45

Tests: Four tests will be given during the semester. Midterm Exams: February 26, March 20, April 15, May 15

Final: There will be a comprehensive final exam; Monday May 20, 2024; Time: 11:30-13:30.

The final is mandatory and you are responsible for making sure that you can attend at this time.

Grading policy: The overall course grade will be determined as follows:

30 % - lab group assignments (15% each)

40% - midterm exams (10% each)

30% - comprehensive final exam

Letter grades will be assigned according to the guidelines

A = 90 - 100

B = 80 - 90

C = 60 - 80

D = 50 - 60

F = below 50

The cutoffs for +'s and -'s will be decided at the end of the semester.

Provisional Course Outline

Astronomy, Astrophysics, Cosmology, and Astrobiology

(Please note this may be revised during the course to match coverage of material during lectures, etc.)

1- From Ptolemy to Newton

1st week: Astronomy 2500 years ago

2nd week: Copernican revolution and Kepler's laws of planetary motion

3th week: Newtonian celestial mechanics

2- Stars and Galaxies

4th week: The Milky Way

5th week: Astronomically far away: Parallax and distance measurement

6th week: Classifying stars: The Hertzsprung-Russell diagram

7th week: The birth and death of stars like the Sun

8th week: Supernova and black holes

3- Lookback time

9th week: Hubble's law and the expanding Universe

10th week: The Big Bang theory

4- Exoplanets and Exolife

11th week: The habitable zone

12th week: Are we alone? Space colonization and the Fermi paradox

Fall 2024 Calendar

- ▶ January 29: Lecture 1
- ▶ January 31: Lecture 2
- ▶ February 5: Lecture 3
- ▶ February 7: Lecture 4
- ▶ February 14: Lecture 5
- ▶ February 21: Lecture 6
- ▶ February 22: Review
- ▶ **February 26: Midterm Exam**
- ▶ February 28: Lecture 7
- ▶ March 4: Lecture 8
- ▶ March 6: Lecture 9
- ▶ March 11: Lecture 10
- ▶ March 13: Review
- ▶ March 18: Lab I
- ▶ **March 20 : Midterm Exam**
- ▶ March 25: Lecture 11
- ▶ March 27: Lecture 12
- ▶ April 1: Lecture 13
- ▶ April 3: Lecture 14
- ▶ April 8: Lecture 15
- ▶ April 10: Review
- ▶ **April 15: Midterm Exam**
- ▶ April 17: Lecture 16
- ▶ May 1: Lecture 17
- ▶ May 6: Lab II
- ▶ May 8: Lecture 18
- ▶ May 13: Review
- ▶ **May 15: Midterm Exam**
- ▶ **May 20: Final Exam**

How to be successful in this course
PLEASE SE READ CAREFULLY

1. This is not a correspondence course. Attendance at lectures is highly encouraged.
2. Make sure you visit the course website regularly. Check the announcements.
3. TESTS: Multiple choice with questions taken from the lectures
4. test problems are loosely based on those you will find in the worksheet assignments. Please check the schedule of tests for conflicts with religious observance. Please let me know ASAP if you see any conflicts; a different time will be arranged so that you can take the test. Make-up tests will be given only for valid reasons.
5. Please contact me immediately if you think that a genuine mistake has occurred in the grading of tests. Clerical errors in grading will of course be rectified as soon as possible.
6. Students with special requirements/learning disabilities should see me as early as possible during the semester. Note that it is the responsibility of students with special accommodations to contact the instructor as early as possible to make the appropriate arrangements for testing. Please note that I cannot allow students to take tests under conditions different from those experienced by the rest of the class (extra time, separate room, etc.) unless they have the appropriate paperwork (VISA form) from the Student Accessibility Center. The Student Accessibility Center will issue formal instructions to me about how students with disabilities are to be accommodated.