

ASTR 007 – Introduction to Astronomy

Fall 2024 Syllabus

Lehigh University
Dr. Sean McCloat
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Contact Information:

Office: Lewis Lab 411

Office Hours: Tuesday 2:30 – 4:00pm

Thursday 10:00 – 11:30am

By appointment in office or Zoom.

Course Information:

Mon/Wed 1:35 – 2:55pm

Lewis Lab 270

Textbook: Astronomy 2nd Ed., [online via OpenStax](#)

Course Description

This course is all about understanding what you see when you look up, and the nature of your place in the cosmos from a historical and modern scientific perspective. We will survey a range of topics that covers the night sky, constellations, the seasons, stars, planets, galaxies, and how we understand the universe we live in today. Historically, the ability to do astronomy was a matter of survival as ancient peoples around the world depended on the motions of the stars as a reliable natural calendar and for the promise of a good harvest. Insight and rational revelation to the true nature of the Earth's place in the solar system and universe were faced with harsh rebuke and often times *death*.

Students will learn:

1. To explain how celestial bodies appear to move across the sky;
2. To apply the laws of planetary motion and gravity;
3. To understand how the properties of light can be measured with telescopes;
4. To describe the formation and contents of our Solar System;
5. To understand how fundamental properties of stars can be measured;
6. To describe the properties of the Milky Way and other galaxies;
7. To understand the history of the Universe

Grading:

Grades are based on regular homework assignments, two exams during the semester, the final exam, and other potential activities intended to emphasize areas of student interest.

Attendance is not tracked or graded – your grade will reflect your attendance as a matter of course.

Grading Scale:

94-100 = A	80-83 = B-	67-69 = D+
90-93 = A-	77-79 = C+	64-66 = D
87-89 = B+	74-76 = C	60-63 = D-
84-86 = B	70-73 = C-	<60 = F

Grades are determined by final accumulated points from all class assignments, homework, exams, etc., after the final exam and assigned according to the bracket above. Final grades may be curved depending on overall class performance; *grades will only improve if curved.*

Potential example:

Homework: 13 x 30pts = 390
 Exams: 2 x 100pts = 200
Final Exam: 1 x 150pts = 150
 Total: 740 pts

Student: Kirk	Student: Spock	Student: McCoy
Homework: 210/390	Homework: 385/390	Homework: 390/390
Exams: 85 + 85 = 170/200	Exams: 50 + 95 = 145/200	Exams: 76 + 86 = 162/200
<u>Final Exam: 125/150</u>	<u>Final Exam: 145/150</u>	<u>Final Exam: 135/150</u>
Final Grade: 68% // D+	Final Grade: 91% // A-	Final Grade: 93% // A-

Homework

Homework will be assigned each week. It can be completed online using the course website, available from Wednesday after class and due Sunday evenings. Homework is intended to reinforce content discussed during lecture. Students are allowed to work in small groups on the homework but must note who they worked with, and each student must submit

Exams

There will be two exams during the semester and the final exam during finals week (note: the finals week schedule does not get posted until early in the semester). Exams are individual efforts: you are not allowed to work with other students or use AI tools. Doing so constitutes cheating and will be dealt with directly and harshly.

Extra Credit

Extra credit opportunities may arise during the semester in a variety of forms. There may be guest colloquium speakers visiting the department/campus – students are encouraged to

attend these and respond to the content of the presentation. A project may be available for students to identify a subject they have interest in and engage in independent research into that topic – a chance for students to spend the time learning something they want to and get class credit for it.

Academic Integrity

The expectation is always that you will present your own work, in your own words. The use of AI tools to generate or modify text to present it as original is not allowed in this class.

All members of the Lehigh community have a responsibility to maintain academic integrity. Resources and details of expectations at Lehigh are available on the [Provost's website](#). It is expected that all students will abide by these standards throughout the course (e.g., homework, quizzes, papers, exams, projects, etc.). Students are encouraged to ask questions for further clarity throughout the semester. Violations of academic integrity standards will not be tolerated and will be handled according to the guidelines in the University's Student Conduct System.

Accommodations for Students with Disabilities:

Lehigh University is committed to maintaining an equitable and inclusive community and welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodation, a student with a disability must contact Disability Support Services (DSS), provide documentation, and participate in an interactive review process. If the documentation supports a request for reasonable accommodations, DSS will provide students with a Letter of Accommodations. Students who are approved for accommodations at Lehigh should share this letter and discuss their accommodations and learning needs with instructors as early in the semester as possible. For more information or to request services, please contact Disability Support Services in person in Williams Hall, Suite 301, via phone at 610-758-4152, via email at indss@lehigh.edu, or online at <https://studentaffairs.lehigh.edu/disabilities>.

The content of this syllabus and the lecture schedule are subject to change in order to adapt to the semester as it unfolds.