

Astronomy 103 Fall 2020: Intro. to Astronomy and The Solar System rev 01/06/2021

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Class: Online M & W 4:00 pm CDT (sections 1-4) or 5 PM (sections 5-8). Zoom opens 10 minutes early for announcements/questions <https://olemiss.zoom.us/j/94389796564>

Labs: one evening/week M, Tu, W, or Th. Lewis 1 Basement of Lewis Hall, enter from Bus area

Office Hours: Zoom meetings on request (email questions or comments any time)

Texts: Cosmic Perspective, Bennett et al., 9th Edition, 2017 (**7th or 8th ed. are OK & cheaper**)
Astro 103 Fall 2020 Lab Manual (from Ole Miss Media in Gerard Hall, not the bookstore)

Learning Objectives:

1. Introduction to the history and physics background of astronomy,
2. Learn the characteristics of solar system's bodies, and
3. Participate in observing the sky and astronomy lab experiments

Read the assigned chapter **before** class. Note: The schedule below is subject to adjustment.

Date	Subject	Chapter
20 Jan	Introduction, scale of the universe	1
25 Jan	Introduction: history of the universe, spaceship Earth	1
27 Jan	Patterns in the sky: Constellations, Seasons	2
1 Feb	Patterns in the sky: Lunar phases, eclipses, retrograde motion, parallax	2
3 Feb	Ancient astronomy, Copernicus, Kepler, Galileo,	3
8 Feb	The nature of science and pseudo-science	3
10 Feb	Physics: Motion, Newton's Laws, Conservation laws,	4
15 Feb	Physics: Gravity, orbits, tides, acceleration of gravity	4
17 Feb	Physics: Properties of light and matter	5
22 Feb	Physics: Spectroscopy: learning form light	5
23 Sep	First Test (on blackboard at 5:30 PM)	ch 1-4
24 Feb	Telescopes: types, characteristics, calculations	6
1 Mar	Our Solar System: Intro Tour and Patterns	7
3 Mar	Our Solar System: Formation and age of the Solar System	8
8 Mar	Terrestrial Planets: planet shaping processes	9
10 Mar	Terrestrial planets: Moon, Mercury, & Mars	9
15 Mar	Terrestrial Planets: Venus and Earth	9
17 Mar	Terrestrial planet atmospheres: Atmospheric basics	10
22 Mar	Terrestrial planet atmospheres: Comparing terrestrial atmospheres	10
23 Oct	Second test (on blackboard at 5:30 PM)	ch 5-8
24 Mar	Giant planets: Planetary Interiors/Atmospheres: Jup., Sat., Ur., Nep.	11
29 Mar	Giant planets: Moons & Rings: Jupiter, Saturn, Uranus, and Neptune	11
31 Mar	Small solar system bodies: Asteroids, Meteorites, and Comets	12
5 Apr	Small solar system bodies: Pluto, Kuiper Belt, Impact dangers	12
7 Apr	Extrasolar Planets: Detection, Nature, Formation, Comparison to SS	13
12 Apr	Extrasolar Planets: Detection, Nature, Formation, Comparison to SS	13
13 Apr	Third Test (on blackboard at 5:30 PM)	ch 9-12
14 Apr	Our Star: The Sun, The Sun-Earth Connection	14
19 Apr	Our Star: The Sun, The Sun-Earth Connection	14
21 Apr	Life in the Universe	24
26 Apr	COMPREHENSIVE FINAL EXAM (on blackboard 7:00 PM)	ch 1-14 + 24
30 Apr	COMPREHENSIVE FINAL EXAM (on blackboard 4:00 PM)	ch 1-14 + 24
Semester Grade Algorithm:		

25% Labs: You must do at least 75% of the labs to pass the course. Don't miss labs!

20% Homework/Quizzes.

35% Average of the 3 tests.

20% Final Exam: chapters 1-14 + 24

Attendance at all classes is expected. More than 3 unexcused absences can affect your grade.

The course syllabus and chapter outlines are posted on Blackboard. The outlines should be used for study guides. Lecture PowerPoints are also posted on Blackboard. Recordings of lectures for review are on Google Drive.

<https://drive.google.com/drive/folders/12oXETEgYr53siTkBGKSIXjioM4bjCtLA>

Homework/quizzes and tests will be posted on blackboard. The quizzes are open book and due Saturday at midnight. Tests are on Tuesday's at 5:30 & are timed and **not** open book or notes.

Answers to HW/quizzes and tests will be posted on Blackboard. Use back quizzes and tests to correct misunderstandings and use as study guides. Quizzes and tests will be primarily based on the text though other topics will also be covered during the lectures.

Due to Covid-19 restrictions, lab schedules have been revised. Weekly in person labs are required. For questions, contact your lab TA. Missing more than 3 of labs will cause failure for the course. Missed labs may be made up with a valid excuse. Be prompt for labs! Some may be at our off-campus dark observing site.

ASTRO 103 Spring 2021 Lab Manual. Purchase these from Ole Miss Media in Gerard Hall. (not book stores) Your lab TA may post instructions you can print out for some labs. You will also need a scientific calculator for some labs.

Extra credit reading/journaling and/or outside class video viewing can add to your exam grade. Note: This option may be difficult to work out for online classes. Watch for information.

Recommended YouTube videos: "Study Less - Study Smart" by Marty Lobdell

Other class related videos will be recommended in lectures and emails.

Keep up with posted grades. Don't wait to notice missing work at the end of the semester.

Recommended sources to check or to subscribe to: (I'm always looking for other good sites and books. Let me know if you run across good ones.)

APOD (Astronomy Picture of the Day) at apod.nasa.gov daily images and information

Space news is at universetoday.com astronomy.com and skyandtelescope.com

Monthly sky maps and info at skymaps.com

YouTube site for Astrum. Check out the planet and moon videos. Be ready to skip the ads.

<https://www.youtube.com/channel/UC-9b7aDP6ZN0coj9-xFnrtw>

Recommended supplementary reference (not required, available used online)

"Destiny or Chance: Revisited", Stuart Ross Taylor, Cambridge Univ. Press, 2012