

Astronomy 103 Fall 2017: Intro. to Astronomy and The Solar System rev 7/3/17

Instructor: James Hill 662-547-6970 (H), 662-392-1862 (C) jhill6333@gmail.com
Class Location: Lewis 101 MW 4:00 pm to 4:50 pm (sec 1-4) or 5 to 5:50 (sec 5-8)
Lab: One evening/week day M through Th, 7:00 pm-8:50 or 9:00-10:50
Office Hours: M or W 2:00-4:00pm Lewis Hall #122 (other times by appointment)

Texts: Cosmic Perspective, Bennett et al., 8th Edition, 2017
Astro 103 Lab Manual

Learning Objectives:

1. To learn the physics background and history of astronomy,
2. to learn the characteristics and science of solar system bodies, and
3. to participate in observing and astronomical experiments

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

<u>Date</u>	<u>Subject</u>	<u>Chapter</u>
21 Aug	Introduction, scale and history of the universe, spaceship Earth	1
23 Aug	Patterns in the sky: Constellations, Seasons	2
28 Aug	Patterns in the sky: Lunar phases, eclipses, retrograde motion, parallax	2
30 Aug	History of astronomy, Copernicus, Kepler, Galileo,	3
4 Sept	Labor Day – no class	
6 Sept	Physics: Energy, temperature, matter, phases, atoms, spectroscopy	4
11 Sep	Physics: Newton's Laws, Gravity, Escape Velocity, Mass, Tides	4
13 Sep	Physics: Light, spectra, thermal radiation	5
18 Sep	Physics: How Light tells us about objects	5
19 Sep	First Hour test: Brevard Hall auditorium 6pm	1-5
20 Sep	Telescopes: types, characteristics, calculations	6
25 Sep	Our Solar System: Tour and Patterns	7
27 Sep	Our Solar System: Formation and age of the solar system	8
2 Oct	Terrestrial Planets: planet shaping processes, Moon & Mercury	9
4 Oct	Terrestrial Planets: Earth and Venus	9
9 Oct	Terrestrial planets: Mars	9
11 Oct	Terrestrial planet atmospheres:	10
16 Oct	Terrestrial planet atmospheres: Greenhouse effect, Ozone,	10
17 Oct	Second Hour Test: Brevard Hall auditorium 6pm	6-10
18 Oct	Giant Planets: Formation and characteristics	11
23 Oct	Giant Planets: Jupiter's mysteries	11
25 Oct	Giant planets: Planetary Interiors/Atmospheres: Jupiter, Saturn	11
30 Oct	Giant planets: Planetary Interiors/Atmospheres: Uranus, Neptune	11
1 Nov	Giant planets: Rings & Moons: Jupiter, Saturn, Uranus, and Neptune	11
6 Nov	Small solar system bodies: Asteroids and Comets	12
8 Nov	Small solar system bodies: Pluto, Kuiper Belt, Meteors	12
13 Nov	Extrasolar Planets: worlds around stars beyond the Sun	13
14 Nov	Third Hour Test: Brevard Hall auditorium 6pm	11-13
15 Nov	Our Star-the Sun	14
27 Nov	Our Star-the Sun	14
29 Nov	Life in the Universe	24
4 Dec	COMPREHENSIVE FINAL EXAM 7:30 pm (sec 5-8)	1-14 & 24
8 Dec	COMPREHENSIVE FINAL EXAM 4:00 pm (sec 1-4)	1-14 & 24

Semester Grade Algorithm:

25% Labs: You must do at least 75% of the labs to pass.

20% Daily Quizzes/Homework and Discussion: expect short in class quizzes too.

35% Average of the 3 tests

20% FINAL EXAM: Plan for the final exam on correct date.

Mid-term grade will be 1/3 labs, 1/3 quizzes, 1/3 test 1

Attendance at all classes is expected. The Automated Attendance System using your Ole Miss ID card will be used. Always have your ID with you. Excess absences will affect your grade.

No cell phone use allowed in class. Laptops for note taking in class should not be needed. I'll provide class notes you can use. It's more important for you to participate and ask questions.

Hard copies of chapter outlines and homework/quizzes will be handed out at the end of each class. There will also be short in-class quizzes. Scantron answer sheets to homework will be due the next class day. Bring a scantron to class. Get the purple Scantrons form 18465.

Answer keys to HW/quizzes and tests will be posted on Blackboard. Quiz scantrons will not be accepted after answers are posted. Keep back quizzes and tests to correct and use as study guides. Quizzes and tests will be mainly based on the text though other topics will be covered during the lectures.

The course syllabus, chapter outlines, & test keys will be posted on Blackboard.

Missed tests or in class homework/quizzes must be made up during my office hours within 2 class days of being given unless special permission is granted.

Lab Sections: for questions contact the lab TA. Missing more than 25% of labs will cause failure for the course. Come at the correct time for labs!

Some off campus observing sessions at the dark sky site will be held during lab times.

ASTRO 103 Lab Manual is **required**. Available at the Printing Office across from the Police Station. You will also need a scientific calculator for labs. The TI-30Xa is a good choice.

Reasonable accommodations for absences and for students with disabilities can be provided with advance notice.

Optional extra credit points for the unit tests can be obtained by participating in lab discussions. Extra points can be added to your exam score by journaling a book on planetary science or watching ½ hour after class videos on Wednesdays.

Recommended web sites: (I'm always looking for other good sites to check out. Let me know) APOD (Astronomy Picture of the Day) at apod.nasa.gov daily images and information Interesting site to subscribe to is universetoday.com for space news. Get monthly sky maps and info at skymaps.com