Astronomy 103 Summer 2014: Introduction to Astronomy and The Solar System

Instructor: James Hill 662-392-1862, jhill6333@gmail.com
Class: Lewis 101 M-Th 1:00 pm to 2:50 pm
Office Hours: M-Th 9:00-11:00am (other times by appointment)
Labs: Two evenings/week day M-W or T-Th, 8:30-10-50 pm

Text: Cosmic Perspective, Bennett et al., 7th Edition, 2013

Learning Objectives:

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

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

Date	Subject	Chapter
28 May	Introduction, scale and history of the universe, spaceship Earth	1
28 May	Patterns in the sky: Constellations , Seasons	2
29 May	Patterns in the sky:Lunar phases, eclipses, retrograde motion, parallax	2
29 May	History of astronomy, Copernicus, Kepler, Galileo,	3
2 June	Astronomical time, Calendar, RA-Dec, Star Tracks, Long, Lat.	S1
2 June	Physics: Energy, Temperature, Matter,Phases, atoms, energy levels	4
3 June	Physics: Newton's Laws, Gravity, Escape Velocity, Mass, Tides	4
3 June	Physics: Light, spectra, thermal radiation, Doppler shift	5
4 June	**First hour test**	1-5
4 June	Afternoon Lab	
5 June	Telescopes: types and characteristics	6
5 June	Afternoon Lab	
9 June	Solar System Tour and Formation	7-8
9 June	Terrestrial Planets: tectonics, volcanoes, magnetism	9
10 Jun	Terrestrial planets: Earth	9
10 Jun	Terrestrial planet atmospheres:	10
11 Jun	Terrestrial planet atmospheres: Greenhouse effect, Ozone,	10
11 Jun	**Second hour test**	6-10
12 Jun	Introduction to the Outer Solar System	11
12 Jun	Afternoon Lab	
16 Jun	Giant planets: Planetary Interiors/Atmospheres: Jupiter, Saturn	11
16 Jun	Giant planets: Planetary Interiors/Atmospheres: Uranus, Neptune	11
17 Jun	Giant planets: Rings & Moons: Jupiter, Saturn, Uranus, and Neptune	11
17 Jun	Small solar system bodies: Asteroids and Comets	12
18 Jun	Small solar system bodies: Pluto, Kuiper Belt, Meteors	12
18 Jun	Extrasolar Planets: worlds around stars beyond the sun	13
19 Jun	**Third hour test**	11-13
19 Jun	Afternoon Lab	
23 Jun	Our star: Sunspots, Solar Magnetism, Flares, Energy Transport	14
23 Jun	Our star: Why does the sun shine? Nuclear fusion, neutrinos	14
25 Jun	**COMPREHENSIVE FINAL EXAM** 8:00 am	1-14

Semester Grade Algorithm:

25% Labs:You must do at least 75% of the labs to pass. (max 3 missed)
16% Quizzes/Homework: expect short quizzes for most classes.
13% 1st Test
13% 2nd Test
13% 3rd Test
20% FINAL EXAM: Plan for the final exam on correct date, not earlier.

Mid-term grade if needed 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.

Hard copies of chapter outlines and homework/quizzes will be handed out at the end of classes. There may also be short in-class quizzes. Scantron answer sheets to homework/quiz answers will be due the next class day. You may only turn in your own work - not that of others.

Answers to HW/quizzes and tests will be posted on "Blackboard". Keep back quizzes and tests to correct and use as study guides for the final exam. Quizzes and tests will be based on the text.

Chapter outlines for each chapter will be posted on Blackboard. These can be printed out and used for study guides.

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

Lab Sections: for questions contact the lab TA. Missing more than 30% of labs (3) will cause failure for the course.
Come at the correct time for labs! Monday & Wednesday or Tuesday & Thursday at Lewis 1 or Kennon Observatory.
For information: http://www.phy.olemiss.edu/~kakukk/Astro/Lab/Lab.html

ASTR 103 Lab Manual is **required**. Available at the Printing Office across from the Police Station. You will also need a scientific pocket calculator. The Texas Instruments TI-30Xa is a good choice. Bring the calculator to labs.

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

Suggestion: subscribe to APOD (astronomy picture of the day) at apod.nasa.gov tp get daily images and information. (The archive is worth taking time for as well0
Another great site is universetoday.com.
Also get monthly sky charts at skymaps.com