

Astronomy 103**Fall 2007****Instructor: Dr. Don Summers**

915-7032

Lewis Hall 101 TTh 1:00-1:50

Text: Cosmic Perspective, Bennett.. 4th Ed

Office: Lewis Hall 221

Lab: Kennon Observatory

Office Hours: TTh 2-3

Sections: 1,2 Monday 7-9, 9-11

Phone: 915-7032

Sections: 3,4 Tuesday 7-9, 9-11

Date	Subjects	Chapter Reading (before class)
21 Aug	Introduction, Cosmic address, light year	1
23 Aug	Stars, Constellations, Long/Lat., Seasons, Precession	2
28 Aug	Lunar phases, eclipses, retrograde motion, parallax	2
30 Aug	Earth Size, Kepler's Laws, Venus' Phases, Jupiter's Moons	3
4 Sep	Time, Calendar, RA, Dec., Star Tracks, Long., Lat.	S1
6 Sep	FIRST HOUR EXAM	
11 Sep	Energy, Temperature, Matter Phases, atoms, energy levels	4
13 Sep	Motion, orbits, Newton's & Kepler's Laws	4
18 Sep	Gravity, Escape Velocity, Weight and Mass, Tides	4
20 Sep	Light waves, spectra, thermal radiation, Doppler shift	5
25 Sep	Telescopes: Optical, Radio, and X Ray; Diffraction Limit	6
27 Sep	Solar System Tour and Formation, Radioactive Dating	7,8
2 Oct	Terrestrial Planets, tectonics, volcanoes, magnetism	9
4 Oct	Planet Earth: S-waves, P-waves, Continental Drift	9
9 Oct	SECOND HOUR EXAM	
11 Oct	200 inch Telescope at Mount Palomar	6
16 Oct	Terrestrial Atmospheres	10
18 Oct	Greenhouse effect, Ozone, Escape Velocity	10
23 Oct	Planet Earth: Atmosphere. O ₂ , CO ₂ , Ozone	10
25 Oct	Interiors/Atmospheres: Jupiter, Saturn, Uranus, Neptune	11
30 Oct	The Voyager Space Flight	11
1 Nov	Rings & Moons: Jupiter, Saturn, Uranus, Neptune	11
6 Nov	Rock and Ice: Asteroids and Comets	12
8 Nov	Pluto and Charon, Kuiper Belt, Meteors, Meteor Showers	12
13 Nov	THIRD HOUR EXAM	
15 Nov	Planets around stars beyond the sun	13
27 Nov	Sunspots, Solar Magnetism, Flares, Energy Transport	14
29 Nov	Why does the sun shine? – Nuclear fusion, neutrinos	14
4 Dec	COMPREHENSIVE FINAL EXAM – 4:00 pm Tuesday (not earlier)	1-14

Grading Lab 25% You must do at least 75% of the labs to pass.

Scheme Pop Quizzes 15% It helps to read the chapter before class.

1st Exam 12% You will need a scientific pocket calculator.

2nd Exam 12% The Texas Instruments TI-30Xa is a good choice.

3rd Exam 12%

FINAL EXAM 24% Plan on the final exam on 4 Dec, not earlier.

The 1st lab will be on Monday night, 27 August.

Come on the night and time that you have signed up for.

Labs are a required part of the course.

Bring a scientific calculator lab

Adding exponents ($10^{11} + 10^{11} = 2 \times 10^{11}$).

$$10^{11} \times 10^{11} = 10^{22}$$

stars/galaxy x galaxies = stars in the universe

Learning Objectives: To learn how planets, the sun, and other wonders of the solar system work and to find out how astronomers made these discoveries and to do some of the actual experiments.