Astronomy 101 Fall 2005 Instructor: Dr. Don Summers 662-915-7032
Lewis Hall 101 MWF 3:00-3:50 Text: The Cosmos: Astronomy in the New Millennium
Office: Lewis Hall Room 221 by Pasachoff and Filippenko, 2nd Edition
Office Hours: TTh 2-3

Date	Subject	Read These Before Class
22 Aug	Grand Tour of the Heavens	Chapter 1
24 Aug	Light, Matter, & Energy, Electromagnetic spectrum	Chapter 2
26 Aug	The 200" Telescope at Mt. Palomar in California	Chapter 3
29 Aug	Temperature, Spectral Lines, Doppler shift	Chapter 2
31 Aug	Light and Telescopes	Chapter 3
2 Sep	Light gathering power, angular resolution	Chapter 3
7 Sep	Radio, Infrared, Ultraviolet, X-ray, and Gamma-Ray Scopes	Chapter 3
9 Sep	Observing the stars and planets	Chapter 4
12 Sep	Phases of the moon, rotation of the earth	Chapter 4
14 Sep	Apparent Magnitude, Constellations, RA, Dec, Time	Chapter 4
16 Sep	Path of the sun, seasons, calendars	Chapter 4
19 Sep	FIRST HOUR EXAM	
21 Sep	Survey of the Solar System, Retrograde Motion	Chapter 5
23 Sep	Kepler's three laws of planetary motion	Chapter 5
26 Sep	Galileo and the moons of Jupiter and the phases of Venus	Chapter 5
28 Sep	Newton explains Kepler's third law	Chapter 5
30 Sep	Formation of the solar system	Chapter 5
3 Oct	Terrestrial planets: Mercury, Venus, Earth, and Mars	Chapter 6
5 Oct	Interior of the Earth, Continental Drift, Tides	Chapter 6
7 Oct	Earth's atmosphere, CO2, density, Radioactive dating	Chapter 6
10 Oct	Lunar exploration, Mercury, Venus and Mars	Chapter 6
12 Oct	Jovian Planets: Jupiter, Saturn, Uranus, and Neptune	Chapter 7
14 Oct	Moons and rings	Chapter 7
17 Oct	SECOND HOUR EXAM	
19 Oct	Pluto & Charon, comets, meteors, asteroids, and dinosaurs	Chapter 8
21 Oct	Our solar system and others	Chapter 9
24 Oct	Our star: the Sun (Basic Structure)	Chapter 10
26 Oct	Sunspots, flares, and eclipses, and warped space-time	Chapter 10
28 Oct	Stars: colors, temperatures, and spectral types	Chapter 11
31 Oct	Triangulating distance, absolute magnitude, HR diagram	Chapter 11
2 Nov	Binary stars, star clusters, Cepheid variable stars	Chapter 11
4 Nov	THIRD HOUR EXAM	
7 Nov	Why do stars shine? H --> He, He --> C, neutrinos	Chapter 12
9 Nov	Stars recycle: supernova, neutron stars, gravity waves	Chapter 13
11 Nov	Black Holes	Chapter 14
14 Nov	The Milky Way: A Spiral Galaxy with a Bar	Chapter 15
16 Nov	Galaxies, Hubble's Expansion of the Universe, Dark Matter	Chapter 16
18 Nov	Quasars and Active Galaxies	Chapter 17
28 Nov	FOURTH HOUR EXAM	
30 Nov	Cosmology, Olber's Paradox, Expansion, Age	Chapter 18
2 Dec	3 degree K radiation, Life in the Universe	Chapter 19,20
8 Dec	COMPREHENSIVE FINAL EXAM, 4 pm, Thursday	

Grading Scheme	1st Exam	11%	
	2nd Exam	11%	
	3rd Exam	11%	You will need a scientific pocket calculator. The
	4th Exam	11%	Texas Instruments TI-30Xa is a good choice.
	FINAL EXAM	31%	
	Pop Quizes	15%	
	Observing	10%	(Requires one page writeups on 3 observing nights in 3 different months to see different things)

Extra Credit (Worth 5%)
Read Stephen Hawking's book, "A Brief History of Time." Write one page summarizing and commenting on each chapter, a total of 11 pages. Due December 2.