Astronomy 104 Spring 2006 Instructor: Dr. Don Summers 915-7032
Lewis Hall 101 TTh 1:00-1:50 Text: Cosmic Perspective, 3rd, J. Bennett et al.
Office: Lewis Hall Room 221 Monday Lab Section 1: 7-9pm Sec. 2: 9-11pm
Office Hours: TTh 2-3 Tuesday Lab Section 3: 7-9pm Sec. 4: 9-11pm
Lab: Kennon Observatory Lab Instructor: Julio Tafoya

Date	Subject	Read These Chapters Before Class
17 Jan	Introduction, Distances, light years, constellations	Chapter 1 & 2
19 Jan	Kepler's 3 laws, Newton's Laws, Gravity, orbits	Chapter 3 & 5
24 Jan	Matter, Energy, Temperature, Atomic energy levels	Chapter 4
26 Jan	Light, Wavelengths, Spectral Lines, Doppler Shift	Chapter 6
31 Jan	Spectroscopes, Wien's Law, Black Body Radiation	Chapter 6
2 Feb	Black Body Radiation	Chapter 6
7 Feb	FIRST HOUR EXAM	
9 Feb	Making the 200" Telescope at Mount Palomar	Chapter 7
14 Feb	Telescopes: Optical, Radio, X-ray...	Chapter 7
16 Feb	Why does the sun shine?, Sunspots, Neutrinos	Chapter 15
21 Feb	Distances, Luminosity, Temperature, and Size of Stars	Chapter 16
23 Feb	Crab Nebula	Chapter 18
28 Feb	HR Diagram, Stellar Masses & Binary Stars	Chapter 16
2 Mar	Gas --> New Stars, Old stars Move off the Main Sequence	Chapter 17
7 Mar	Variable Stars, Red Giant and White Dwarf Stars	Chapter 17
9 Mar	SECOND HOUR EXAM	
21 Mar	Two kinds of Supernovae can explode	Chapter 18
23 Mar	Neutron Stars and Gravity Waves	Chapter 18
20 Mar	Black Holes	Chapter 18
30 Mar	Our Milky Way Galaxy, Globular Star Clusters	Chapter 19
4 Apr	100 Billion Galaxies	Chapter 20
6 Apr	Finding Distances with Cepheid Variables, Galaxies	Chapter 20
11 Apr	Hubble's Law, Redshifts, and Distances	Chapter 20
13 Apr	Quasars and Active Galaxies	Chapter 21
18 Apr	Dark Matter in Galaxies and Galaxy Clusters	Chapter 22
20 Apr	What is Dark Matter?	Chapter 22
25 Apr	THIRD HOUR EXAM	
27 Apr	Cosmology, Expanding Universe, Big Bang, 3 K Radiation	Chapter 23
2 May	Early Universe, Inflation, Big Bang, Sub-Atomic Particles	Chapter 23 S4
4 May	Search for Extraterrestrial Civilizations	Chapter 24
9 May	COMPREHENSIVE FINAL EXAM, 4:00pm, Tuesday, not earlier!	

Grading Scheme:
- Lab 25% — You must do at least 70% of the labs to pass.
- 1st Exam 12% — Bring a picture ID to tests.
- 2nd Exam 12%
- 3rd Exam 12% — You will need a scientific pocket calculator. The
- FINAL EXAM 24% — Texas Instruments TI-30Xa is a good choice.
- Pop Quizzes 15%

Extra Credit (Worth Up to 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 May 4.

Please come to the lab night and time you have signed up for.
Labs are a required part of the course.
You must do at least 70% of the labs to pass.
Labs start on Monday night, January 23.
Bring a scientific calculator to lab. $10^{10} \times 10^{10} = 10^{20}$