

Astronomy 104	Spring 2005	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: Chris Snyder	

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

Grading: Lab	25%	You must do at least 70% of the labs to pass.
Scheme 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 April 29.

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 24.

Bring a scientific calculator lab.

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