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

Read These

Date    Subject                                                   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                                           o
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 Quizes 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.

10  10  20
10  x 10  = 10