

**PHYS 710 / 810**  
**Introduction to Modern Astrophysics**

**Textbook:** *Introductory Astronomy and Astrophysics* (4th edition)  
M. Zeilik and S.A. Gregory  
Saunders College Publishing

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**Lecture Schedule**  
**Spring, 1998**

<b>No.</b>	<b>Topic</b>	<b>Textbook</b>	
1	Introduction, Electromagnetic Radiation		8-1
2	Atomic Structure		8-2
3	Spectra and Spectrum Analysis		8-3,4,5
4	Blackbody Radiation, The Transfer Equation		8-6,7
5	Telescopes for Many Wavelengths		9-1,2
6	Detectors and Image Processing, Spectroscopy		9-3,4,5
7	Structure of the Sun, The Photosphere, The Chromosphere		10-1,2,3
8	The Corona, Solar Wind and Solar Activity		10-4,5,6
9	Stellar Distances and Magnitudes		11-1,2,3,4
10	Binary Systems, Visual Binaries, Spectroscopic Binaries		12-1,2,3
11	Eclipsing Binaries, Stellar Diameters		12-4,5
12	Stellar Atmospheres, Stellar Classifications		13-1,2
13	The Hertzsprung-Russell Diagram		13-3
14	The Milky Way Galaxy		14-1,2,3,4,5
15	Interstellar Dust, Interstellar Gas		15-1,2
16	Star Formation		15-3
17	Laws of Stellar Structure, Theoretical Stellar Models		16-1,2
18	Stellar Evolution, Synthesis of Elements		16-3,4,5
19	White Dwarfs, Brown Dwarfs, Neutron Stars, and Black Holes		17-1,2,3
20	Variable Stars		18-1,2,3
21	Mass-Losing Stars, Cataclysmic Variables, X-Ray Sources		18-4,5,6
22	Galactic Rotation, Stellar Motions		19-1,2,3,4

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23	Structure of the Galaxy	20-1,2,3,4
24	Galaxies Beyond the Milky Way	21-1,2,3,4,5
25	Hubbles's Law and the Distance Scale	22-1,2,3
26	Large Scale Structure of the Universe	23-1,2,3,4,5
27	Active Galaxies and Quasars	24-1,2,3,4,5
28	Cosmology	25-1,2,3,4 26-