

Franklin & Marshall College - Physics and Astronomy Department  
 AST 121: Introduction to Astrophysics  
 F. Crawford  
 Spring 2014 Course Schedule

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Meeting	Day	Topics	Reading
1	W Jan 15	Intro; Math Review	Notes
2	F Jan 17	Math Review	Notes
3	M Jan 20	Celestial Sphere	1.1, 1.2
4	W Jan 22	Celestial Coordinates	1.3, 1.5
5	F Jan 24	Mechanics and Orbits	2.5, 3.1-3.3
6	M Jan 27	Kepler's Laws	2.5, 3.1-3.3
7	W Jan 29	Kepler's Laws	2.5, 3.1-3.3
8	F Jan 31	Mechanical Energy; Trajectories	2.5, 3.1-3.3
9	M Feb 3	Tides and Tidal Effects	4.2
10	W Feb 5	Roche Limit; Hill Radius	4.3
11	F Feb 7	Telescopes; Angular Resolution	6.1, 6.2, 6.6, 6.7
12	M Feb 10	Radiation Properties; Bohr Atom	5.1
13	W Feb 12	Spectra; Blackbody Radiation	5.3, 5.7
14	F Feb 14	Gas Properties; Opacity; Ideal Gas	5.3, 5.4, 9.2
15	M Feb 17	Solar Heating of Planets; Albedo	8.2, Notes
16	W Feb 19	Planetary Atmospheres; Scale Height	8.2, 9.2
17	F Feb 21	Atmospheric Escape of Gas	8.2, 9.2
18	M Feb 24	Radioactive Decay; Planetary Interiors	Appendix 9, 10.2, Notes
19	W Feb 26	Parallax; Stellar Magnitudes and Colors	13.1-13.3
20	F Feb 28	Extinction of Starlight	16.1
21	M Mar 3	Hertzsprung-Russell Diagram; Review	14.2-14.4
22	<b>W Mar 5</b>	<b>Hour Exam</b>	none
23	F Mar 7	Catch Up or Special Topic; Star Formation	none
–	M Mar 10	<i>Spring Break</i>	<i>none</i>
–	W Mar 12	<i>Spring Break</i>	<i>none</i>
–	F Mar 14	<i>Spring Break</i>	<i>none</i>
24	M Mar 17	Star Formation	17.1
25	W Mar 19	Stellar Interiors	14.1, 13.6, 15.1
26	F Mar 21	Nuclear Reactions; Stellar Evolution	15.2, 15.3, 17.2
27	M Mar 24	Variable Stars; Stellar Evolution	17.3, 18.4
28	W Mar 26	White Dwarfs; Degeneracy Pressure	18.1
29	F Mar 28	Degeneracy Pressure; Neutron Stars and Pulsars	18.1, 18.2
30	M Mar 31	Pulsars	18.2, Notes
31	W Apr 2	Black Holes	18.3
32	F Apr 4	Black Holes; Eddington Limit	Notes, 21.2
33	M Apr 7	The Milky Way	19.1-19.6
34	W Apr 9	Dark Matter; Hubble's Law	20.1, 20.2, 20.4, 20.5
35	F Apr 11	Hubble's Law; Quasars and AGN	20.5, 21.1, 21.4
36	M Apr 14	Radio Galaxies; Ly Alpha Forest	21.1, 21.5
37	W Apr 16	Cosmic Microwave Background	23.1
38	F Apr 18	Classical Cosmology	23.2, 23.5
39	M Apr 21	Dark Energy; Fate of the Universe	24.1, 24.2
40	W Apr 23	Wrap Up	none

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All readings are from *Foundations of Astrophysics* by Ryden and Peterson.

Lab meetings start in the second week of class.

The in-class hour exam will be given on **Wed Mar 5**.

The final exam will occur during the final exam period and will be scheduled by the Registrar's office.