Franklin & Marshall College - Physics and Astronomy Department
Physics 112: Fundamental Physics II
K. Krebs and F. Crawford
Spring 2011 Course Schedule

Lecture Schedule

Lecture	Day	Date	Lecture Topics	Serway and Jewett Reading
0	W	Jan 19	Introduction	*none*
1	F	Jan 21	Mass Density; Hydrostatic Pressure; Atmospheric and Gauge Pressure	Ch. 15
2	M	Jan 24	Buoyant Force; Continuity Equation	Ch. 15
3	W	Jan 26	Bernoulli's Equation; Viscous Flow	Ch. 15
4	F	Jan 28	Thermal Expansion; Ideal Gas Law	Ch. 16
5	M	Jan 31	Phase Diagrams; Kinetic Theory	Ch. 16,17
6	W	Feb 2	Heat and Temperature; Specific Heat	Ch. 17
7	F	Feb 4	Changes of State; Radiation, Convection, and Conduction	Ch. 17
8	M	Feb 7	Thermodynamic Work; Heat and Internal Energy	Ch. 18
9	W	Feb 9	Isothermal and Adiabatic Changes	Ch. 18
10	F	Feb 11	Carnot Engine; Efficiency	Ch. 18
11	M	Feb 14	Entropy; Microstates and Macrostates	Ch. 18
12	W	Feb 16	Charge; Insulators and Conductors	Ch. 19
13	F	Feb 18	Coulomb's Law; Electric Field	Ch. 19
14	M	Feb 21	Electric Field; Gauss's Law	Ch. 19
15	W	Feb 23	Gauss's Law; Electric Potential	Ch. 19,20
16	F	Feb 25	Electric Potential; Equipotentials	Ch. 20
17	M	Feb 28	Charge Distributions	Ch. 20
18	W	Mar 2	Capacitors	Ch. 20
19	F	Mar 4	Energy in Capacitors; Electric Current	Ch. 20,21
20	M	Mar 7	Ohm's Law; Resistivity	Ch. 21
21	W	Mar 9	Voltage; Energy and Power; Current Density	Ch. 21
22	F	Mar 11	Internal Resistance; Resistors in Series and Parallel	Ch. 21
–	M	Mar 14	*Spring Break - no class*	*none*
–	W	Mar 16	*Spring Break - no class*	*none*
–	F	Mar 18	*Spring Break - no class*	*none*
23	M	Mar 21	RC Circuits; Kirchhoff's Rules	Ch. 21
24	W	Mar 23	Magnets; Magnetic Fields	Ch. 22
25	F	Mar 25	Currents and Magnetic Fields	Ch. 22
26	M	Mar 28	Magnetic Force on Moving Charges	Ch. 22
27	W	Mar 30	Faraday's Induction Law; Motional emf	Ch. 23
28	F	Apr 1	AC and DC Generators; Inductance; RL Circuits	Ch. 23
29	M	Apr 4	EM Waves; Irradiance; Energy Quanta; Atoms and Light	Ch. 24
30	W	Apr 6	EM Spectrum; Scattering; Reflection	Ch. 24,25
31	F	Apr 8	Refraction; Total Internal Reflection	Ch. 25
32	M	Apr 11	Lenses; Focal Points and Focal Planes	Ch. 26
33	W	Apr 13	Single and Combination Lenses	Ch. 26
34	F	Apr 15	Mirrors; Polarization	Ch. 26,24
35	M	Apr 18	Polarization; Young's Experiment	Ch. 27
36	W	Apr 20	Interference and Diffraction	Ch. 27
37	F	Apr 22	X-rays; Radioactivity; Dosimetry	Ch. 27,30
38	M	Apr 25	Radioactive Decay; Half-life; Fission and Fusion	Ch. 30
39	W	Apr 27	Review and Wrap Up	*none*

All readings are from *Principles of Physics: A Calculus-Based Text* (4th edition) by Serway and Jewett.

Three exams will be given during the semester on **Tue Feb 22**, **Tue Mar 8**, and **Tue Apr 3** during the multiple-section course common exam period.

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