

University Physics 2 - Spring 2012 (- revised 02/21/12) - Schneider

| Week | Chapters | Topics | Reading Sections | Relevant Examples | Ranking Tasks/Tutorials | Suggested Problems (also tutorials/hw in webasign) |
|---------------------|---|--|---|---------------------------------------|-----------------------------------|--|
| 01/30-02/03 | <i>Chapter 30: Maxwell's Equation and Electromagnetic Waves</i> | Electromagnetic Waves (Sec 30.4 1&2/5) | 30-4 (1/5, 2/5) | | | 21, 23 |
| | <i>Chapter 31: Properties of Light</i> | Speed of light, Reflection/Refraction, Polarization, Light Spectra, Sources of Light | 31-1, 31-3 (all), 31-4 (1/5, 2/5, 3/5 {concepts}, 4/5), 31-7, 31-8 (2/3 {concepts}, 3/3 {concepts}) | 31-5, 31-6, Interactive 31-4 and 31-5 | OpticsHW 117-118 [Team HW143-145] | 29, 31, 33, 41, 43, 53, 61, 81 |
| 02/06-02/10 | <i>Chapter 32: Optical Images</i> | Plane and Spherical mirrors, Thin Lenses, Optical Instruments (near/far sighted, microscope, telescope, spyglass) | 32-1 (all), 32-2 (2/5, {start eq 32-12} 3/5, 4/5), 32-4 (concepts in: 1/4, 3/4, 4/4) | 32-1, 32-2, 32-9, 32-11 (algeb) | [Team HW121/124] | 45, 47, 49, 55a, 63, 73, 95, 99 |
| 02/13-02/17 | <i>Chapter 33: Interference and Diffraction</i> | Phase difference and Coherence, Interference in thin films, Two slit interference, | 33-1, 33-2, 33-3 (1/2, 2/2 [eq 33-8]), 33-4 (1/2, 2/2 {concepts}), 33-8 (1/2) | 33-3, 33-5, 33-6, 33-10 | | 27, 29, 35, 41, 45, 59, 63 |
| 02/20-02/24 | <i>Chapter 33: Interference and Diffraction (continued)</i> | Diffraction of a single slit, Diffraction grating, Phasors (vector kind!) | " | " | | " |
| Fri 02/24/12 | Test #2 (Chapters 30-33) | <p>Potential Test Topics:</p> <ul style="list-style-type: none"> * Polarization (rotated polarizers) * Snell's law (also total internal reflection - can light escape?) * Thin lenses and mirrors (single lens/mirror, calculations, sketches, conceptual questions) * Double lens systems (calculations, conceptual, applications: telescope, microscope, spyglass) * Double slit/single slit/diffraction grating (finding location of a certain order) * multiple slits - 3 or more (interference pattern, effect of increasing the number of slits) [thin film interference on next test] | | | | |