

Lecture Experimental Physics 3 - Winterterm 2012/13

Tu		Fr	
9-Oct	<i>Organization Time variable fields Faraday's laws of induction</i>	12-Oct	<i>Lenz's rules Selfinduction</i>
16-Oct	<i>Energy of magnetic fields displacement currents</i>	19-Oct	<i>Maxwell equations Generator and engines</i>
23-Oct	<i>ac current rotary current complex resistances</i>	26-Oct	<i>High-pass/low-pass filter frequency filter transformers</i>
30-Oct	<i>Impedance current rectification electron tube</i>	2-Nov	<i>Symposium: Physics of Cancer</i>
6-Nov	<i>oscillating circuit coupled oscillating circuits</i>	9-Nov	<i>generation of undamped oscillations Hertzian dipol</i>
13-Nov	<i>Dipol radiation wave equations</i>	16-Nov	<i>plane electromagnetic waves periodic waves polarization of em waves</i>
20-Nov	<i>magnetic field of em waves transport of energy and momentum measuring the velocity of light</i>	23-Nov	<i>standing em waves wave guides em frequency spectrum</i>
27-Nov	<i>em waves in matter refractive index Absorption, dispersion</i>	30-Nov	<i>wave equations for waves in matter Waves at interfaces</i>
4-Dec	<i>Birefringence generation of polarized light</i>	7-Dec	<i>Geometrical optics optical imaging concave mirrors</i>
11-Dec	<i>Prisms Lenses</i>	14-Dec	<i>lens errors matrix methods</i>
18-Dec	<i>Interference/Coherence Generation and interference of coherent waves</i>	4-Jan	<i>multi ray optics Diffraction</i>
8-Jan	<i>Fraunhofen/Fresnel diffraction general description of diffraction</i>	11-Jan	<i>Fourier description of diffraction Dispersion</i>
15-Jan	<i>Optical instruments, the eye amplifying optical instruments</i>	18-Jan	<i>Role of diffraction for opt. instruments Spectrograph, monochromator</i>
22-Jan	<i>Confocal microscopy Near field microscopy Active and adaptive optics</i>	25-Jan	<i>Fourier optics wave guides Optical Traps</i>
29-Jan	<i>Special Theory of Relativity</i>	1-Feb	WRITTEN EXAM