

Experimental Physics 1

Prof. Dr. Josef Käs, Dr. Mareike Zink

Lectures (Prof. Käs):

Tu, Fr: 11:00 am, GrHS

Seminar (Hans Kubitschke):

Tu: 1:30 pm, SR 221

To graduate every student has to do the homework and gain 50% of the points

Homework exercises will be announced every Friday during the lecture + on the internet.

Homework deadline: Friday BEFORE 11:00 am
Postbox 1st floor next to room 302

Written exam: Feb. 3th, 11:00 – 13:00 h (GrHS)

Contact: jkaes@physik.uni-leipzig.de

zink@physik.uni-leipzig.de (Room 325)

www.softmatterphysics.com

(to go “teaching”)

Lecture Experimental Physics 1 - Winter term 2011/12

Tu		Fr	
11-Oct	<i>Organization Physical measurand, length, time... and their units</i>	14-Oct	<i>Minisymposium: Physics of Cancer</i>
18-Oct	<i>Mechanics of a point mass velocity and acceleration uniformly accelerated motion</i>	21-Oct	<i>non-constant acceleration Forces</i>
25-Oct	<i>Newton's laws</i>	28-Oct	<i>Energy conservation of energy Momentum</i>
1-Nov	<i>Gravitation Motion of planets</i>	4-Nov	<i>Moving reference systems accelerated reference systems</i>
8-Nov	<i>Lorentz-Transformation</i>	11-Nov	<i>Systems of point masses reduced mass momentum of particle systems</i>
15-Nov	<i>Collision of 2 particles</i>	18-Nov	<i>Conservation laws (momentum, energy)</i>
22-Nov	<i>Dynamics of extended rigid bodies</i>	25-Nov	<i>Forces, inertia, rotational energy</i>
29-Nov	<i>Equation of motion of a rotating rigid body</i>	2-Dec	<i>Gyroscopic motion</i>
6-Dec	<i>Structure of solids and liquids Deformation of solids</i>	9-Dec	<i>Liquids</i>
13-Dec	<i>Gases</i>	16-Dec	<i>Basic fluid dynamics</i>
20-Dec	<i>Mechanical oscillations complex numbers</i>	6-Jan	<i>Superposition of oscillations</i>
10-Jan	<i>Free, damped oscillations forced oscillations</i>	13-Jan	<i>forces oscillations energy of oscillations of a point mass</i>
17-Jan	<i>Coupled oscillations</i>	20-Jan	<i>Mechanical waves</i>
24-Jan	<i>propagation of waves energy density + transport, dispersion</i>	27-Jan	<i>Superposition of mechanical waves Dispersion, Refraction, Reflection</i>
31-Jan	<i>Standing waves Acoustics</i>	3-Feb	<i>Exam</i>