Zurich University of Applied Sciences

School of Engineering

t.PHMT2 - Physik für Maschinentechnik 2

Person responsible for the course:	Christoph Georg Stamm, stac
Credits:	4
Valid for:	2010/2011
Last saved:	06.09.2010 17:03

Learning objectives:

Tools: Students get familiar with the physical way of thinking and with physical methods working on selected topics from science and technology. Physics is recognized as a foundation of modern engineering science. The course of action includes experiments, models, thinking in analogies, recognition of structures. The students are able to reflect results from calculations, models and measurements based on limit cases, plausibility and empirical values gathered in daily routine, in technology and in science.

Knowledge: Students are familiar with the basics of mechanics, electricity and geometrical optics and are able to apply their knowledge to nature and technical phenomena.

Course content:

Mechanics:
Momentum Laws of motion (exchange and conservation), angular momentum with rotation about a fixed axis androlling motion

Electricity:
Elementary Terms: Voltage, charge and current (no fields); electric circuit with passive elements,e.g., resistor, capacity, inductance. Dynamics and aspects of energy during transient phenomenon and in oscillating circuit

Geometric optics: Refraction and dispersion, thin lenses, law of imagaging, elementary optical instruments

Previous knowledge:

Physics and Mathematics teached during the first term

Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14x2L
Tutorial/Practicum	14x2L
Group teaching	
Block instruction	
Seminar	

Assessment:

According to the table or as specified in writing by the lecture at the beginning of the semester!

Number	Type	Weighting
1	End of term exam	60 %
1	Exam during the semester	2 x 20 % (or 1 x 20 % and a report of laboratory work
	Further assessments	

Language of instruction:

Deutsch

Instruction material:

Physik, Halliday and Resnick Walker Physik, Tipler

Comments:

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