Zurich University of Applied Sciences

School of Engineering

t.PHVS3 - Physik für Verkehrssysteme 3

Person responsible for the course:	Stephan Scheidegger, scst
Credits:	4
Valid for:	2010/2011
Last saved:	07.09.2010 10:00

Learning objectives:

Students are familiary with the physical basics of electromagnetic induction and AC-circiuits and can apply them

They can model and simulate RCL-Circuits

They can indentify typical system behaviour by using phase diagrams

They are familiar with the flow-storage concept and the physical concept of fields

They know the elementar concepts to describe the propagation of elecromagnetic fields / waves

Course content:

The magnetic field and magnetic forces

Electromagnetic induction

Applications of inductions (Generator, transformer, frequency converter)

RCL-Circuits

Oscillators, effects at high frequency

Maxwells equations

Basics of optics

Previous knowledge:

Mathematics and Physics 1st year

Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	2
Tutorial/Practicum	2
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	80%
	Exam during the semester	
1	Further assessments	20%

Language of instruction:

german

Instruction material:

lecture notes

Comments:

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