Zurich University of Applied Sciences

School of Engineering

t.MBS - Modellbildung und Simulation

Person responsible for the course:	Markus Weber Sutter, webm
Credits:	3
Valid for:	2010/2011
Last saved:	09.09.2010 12:45

Learning objectives:

Enhancement of the students' capability to assess computer simulation tools with respect to their technical potential, to time and effort for, and the benefit generated through their use. In addition students shall learn how to get started with some of these tools.

Course content:

In a first more general and basic introductory part of this course, various classes of simulation problems are presented in combination with methods to categorize and generalize them.

The main part of the course will be replenished with work on two to four different and representative problems, while stretching over about 12 weeks. Solving these selected problems algebraically (only as far as this is possible) as well as by numerical simulation under ExCel, MATLAB , or any other commercial tool will give an impression of both, the effort that has to be put in any numerical solution and the benefit generated.

Homework problems will be given as an opportunity to practice, but they are not mandatory and will neither be turned in nor corrected.

Previous knowledge:

essential:
math: calculus I, physics: continuity equations

desirable:

calculus I and II, numerics I and II, fluid dynamics and thermodynamics

Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14x3L
Tutorial/Practicum	
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	
	Exam during the semester	
	Further assessments	

Language of instruction:

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Instruction material:

Some notes will be handed out or made accessible on the intranet. In some cases, appropriate textbooks will be recommended by the lecturer.

Comments:

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