Zurich University of Applied Sciences

School of Engineering

t.MNEU - Mathematik Numerik für Energie- und Umwelttechnik

Person responsible for the course:	Nadin Stahn, stan
Credits:	5
Valid for:	2011/2012
Last saved:	08.03.2012 18:02

Learning objectives:

The students have
- an overview of the most important numerical methods

and can
- categorise problems and choose an adequate numerical solving method
- analyse, apply and modulate software
- implement algorithms for selected problems.

Course content:

approximation
- Taylor's and Fourier's series

numerics of ODEs and ODES - selected examples
- Runge-Kutta's method

numerics of nonlinear equations

interpolation

linear regression

numerical differentiation and integration

boundary value problems - numerics of PDEs - selected examples

Previous knowledge:

MAE1 and MAE2
MLAE1 and MLAE2

Teaching method:

Type of lesson:	**Number of lessons per week:**
Lecture	14 x 6
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	mindestens 60%
	Exam during the semester	
	Further assessments	accordant written determination of the lecturer at the beginning of the semesterge

Language of instruction:

German

Instruction material:

dependent on the lecturer

Comments:

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