

t.MNMT1 - Mathematik: Numerik für Maschinentechnik 1

Person responsible for the course: Nadin Stahn, stan
Credits: 3
Valid for: 2011/2012
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Learning objectives:

This course

- provides the numerical armamentarium and the numerical skills needed for the engineering courses
- introduces to the way of thinking of discrete and numerical mathematics.

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.
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Course content:

approximation

- Taylor's and Fourier's series

numerics of ODEs and ODES - selected examples

- Euler's method
- Taylor's method
- Runge-Kutta's method

numerics of nonlinear equations

interpolation

linear regression

Previous knowledge:

MAE1 and MAE2

MLAE1 and MLAE2

Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14x(2L+2L)
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	accordant written determination of the lecturer at the beginning of the semester

Language of instruction:

German

Instruction material:

dependent on the lecturer

Comments:

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