

t.MAS1 - Mathematik: Analysis und Stochastik 1

Person responsible for the course: Franz Müller, mlra

Credits: 3

Valid for: 2010/2011

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Learning objectives:

This course

- provides the mathematical knowledge and skills needed for the engineering courses
- introduces mathematical approaches of problem solving and trains abstract thinking
- furthers general knowledge in mathematics

Course content:

application of complex numbers in engineering

Taylor series

Fourier series

functions in several variables

- basical notions
- differential calculus
- integral calculus
- applications in engineering

combinatorics and elementary probability theory

Previous knowledge:

courses MAE1, MAE2, MLAE1, MLAE2,

i.e.:

Analysis 1 and 2 (differential- und integral calculus of one variable)

Linear Algebra 1 and 2

Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14x(2L+2L)
Tutorial/Practicum	exercises are integral part of course
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%
	Exam during the semester	20% each
	Further assessments	worked/presented solutions of exercises (depending on lecturer)

Language of instruction:

german

Instruction material:

depending on lecturer (e.g. script, exercise sheets ...)

Comments:

Literature (e.g.):

Arnol'd: Gewöhnliche Differentialgleichungen. Springer

Walter: Gewöhnliche Differentialgleichungen. Springer

Stiefel: Einführung in die numerische Mathematik. Teubner

further references from lecturer on demand