Course Overview
Mathematics in Science and Engineering

Master’s Thesis
(30 ECTS)

Seminar, Internship, Soft Skills
(13 ECTS)

Mathematical Models from other Universities
(max. 18 ECTS)

Special Lectures in Applied Mathematics*

Mathematical Models from other Universities
(max. 18 ECTS)

Minor / Field of Application
(min. 29 ECTS)

from other universities
(max. 9 ECTS)

Analysis
(min. 9 ECTS)

Numerical Mathematics
(min. 9 ECTS)

Optimization
(min. 5 ECTS)

Geometry, Probability Theory and Statistics
(min. 5 ECTS)

Special Lectures in Applied Mathematics*

Bachelor Mathematics

Mandatory:
MA1001 Analysis 1 36 ECTS
MA1002 Analysis 2
MA1101 Linear Algebra 1
MA1102 Linear Algebra 2
MA1401 Introduction to Probability
MA1302 Introduction to Numerical Analysis
MA1501 Introduction to Discrete Mathematics
MA1902 Introduction to Mathematical Modeling

min. 8 ECTS

MA2003 Measure and Integral
MA2004 Vector Analysis
MA2005 Ordinary Differential Equations
MA2203 Algebraic Structures in Geometry
MA2302 Numerical Analysis
MA2402 Basics of Probability Theory
MA2404 Markov Chains
MA2501 Algorithmic Discrete Mathematics
MA2503 Introduction to Nonlinear Optimization
MA2204 Elementary Differential Geometry

min. 38 ECTS

For additional information, please refer to the examination regulations and module guidelines.

* Modules, which have not been already listed in sections A1.1-A.1.4.
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Mathematics in Science and Engineering

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* In the summer term 2012 started MA2504 (previous modules are MA3501 and MA3504)