Module title | Computational Mathematics
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Abbreviation | 10-M-COM-152-m01

Module coordinator | Dean of Studies Mathematik (Mathematics)
Module offered by | Institute of Mathematics

ECTS | 4
Method of grading | Only after succ. compl. of module(s)
(duration) | (not) successfully completed
Duration | 1 semester
Module level | undergraduate
Other prerequisites | --

Contents
Introduction to modern mathematical software for symbolic computation (e.g. Mathematica or Maple) and numerical computation (e.g. Matlab) to supplement the basic modules in analysis and linear algebra (10-M-ANA-G and 10-M-LNA-G). Computer-based solution of problems in linear algebra, geometry, analysis, in particular differential and integral calculus; visualisation of functions.

Intended learning outcomes
The student learns the use of advanced modern mathematical software packages, and is able to assess their fields of application to solve mathematical problems.

Courses (type, number of weekly contact hours, language — if other than German)
V (1) + Ü (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
project in the form of programming exercises (approx. 20 to 25 hours)
Assessment offered: Once a year, winter semester
Language of assessment: German and/or English

Allocation of places
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Additional information
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Reflected in LPO I (examination regulations for teaching-degree programmes)
§ 22 II Nr. 3 f

Module appears in
Bachelor degree (1 major) Mathematics (2015)
Bachelor degree (1 major) Physics (2015)
Bachelor degree (1 major) Nanostructure Technology (2015)
Bachelor degree (1 major) Economathematics (2015)
Bachelor degree (1 major) Mathematical Physics (2015)
Bachelor degree (1 major) Computational Mathematics (2015)
Bachelor degree (1 major) Functional Materials (2015)
First state examination for the teaching degree Gymnasium Mathematics (2015)
Bachelor degree (1 major) Mathematical Physics (2016)
Bachelor degree (1 major) Economathematics (2017)
First state examination for the teaching degree Gymnasium Mathematics (2019)