Master Mathematics

The Master course “Mathematics” is a continuation of the Bachelor course “Mathematics”. The main goals are: to gain knowledge in scientific methods in mathematics, to gain the ability for discovering and analyzing structures, to learn about new subjects by yourself, to deepen knowledge in subjects of your own choice, to get to the front of current research in one part of mathematics and to learn about practical techniques for solving complex problems.

The course is (like in the Bachelor studies) organized in “modules”, and the rules from the Bachelor studies apply. The Master-Thesis is a module with 30 credit points. Altogether 120 credit points are required for the masters degree – roughly equally distributed over 4 semesters.

The freedom of choice in the Master's course is even larger than at the end of the Bachelor's course. The “studyplan” gives details and rules about the possible choices. There are frequently offered introductory modules and less frequently offered specialized modules.

Out of the four mathematical subjects “Algebra and Geometry”, “Analysis”, “Applied and Numerical Mathematics” and “Stochastics” at least two subjects with 16 and 24 credit points, respectively, must be taken. At least one of those two subjects must be “Algebra and Geometry” or “Analysis”.

Out of the four mathematics subjects one has to choose “Additional Subjects”, i.e. modules with 14-22 credit points. These modules may include “Seminars”.

Finally, one has to take a “Subsidiary Subject”, i.e. modules with 16-24 credit points. The subsidiary subject may be one of the four mathematical subjects (which has not been chosen previously) or one of the subjects of application like Computer Science, Physics, Economics, Mechanical Engineering or Electrical Engineering. These modules are offered by the departments of Computer Science, Physics, Economics, Mechanical Engineering or Electrical Engineering.

In total the “Additional Subjects” and the “Subsidiary Subject” have to add up to at least 38 credits.

Moreover, two seminar modules (each with 3 credit points) in mathematics have to be taken as well as 6 credit points from “Key Qualifications” (cf. offers from the .”Sprachenzentrum” and “House of Competence”). There are different ways to get “Key Qualifications”: language courses with exams, various forms of project work, advanced programming courses and courses offered from ZAK (Zentrum für Angewandte Kulturwissenschaft und Studium Generale).

We recommend a (voluntary) practical work (in a company/business). It corresponds to 8 credits, which can be given if there is a report and a presentation of the practical work. These credits are counted as “Additional Qualifications”.