Modules in Mathematics in English Language

Module identifiers and titles:

MATH-411: Advanced topics in pure mathematics I
MATH-412: Advanced topics in applied mathematics I
MATH-413: Advanced topics in pure mathematics II
MATH-414: Advanced topics in applied mathematics II
MATH-415: Additional topics in mathematics I
MATH-416: Additional topics in mathematics II
MATH-417: Advanced topics in mathematics III
MATH-418: Advanced topics in mathematics IV

Each course consists of lectures (4 hours per week) with an integrated or an additional (2 hours per week) exercise group and yields 9 ECTS credit points.
The topics treated in these courses change from semester to semester. Examples include (ST = Summer Term ["Sommersemester"], WT = Winter Term ["Wintersemester"]):

WT 2022/23: Multivariate Statistics, Probabilistic Combinatorics, Model Categories, Functional Analysis
ST 2022: Mathematical Finance, Riemannian Surfaces, Algebraic Topology, Monte Carlo and Quasi-Monte Carlo Methods
WT 2021/22: Elliptic Curves, High-Dimensional Integration, Mathematical Methods in Machine Learning, Approximation Theory and Its Application
ST 2021: Applied Algebra and Geometry, Homological Algebra, Computational Harmonic Analysis, Functional Analysis, Statistics with R, Stochastic Optimization
WT 2020/21: Algebraic Number Theory, Mathematical Aspects of Quantum Mechanics, Multivariate Statistics, Stochastic Processes
ST 2020: Algebraic Topology, Renewal Theory and Regenerative Processes, Stochastic Geometry, Tropical Geometry, Probability Theory II
WT 2019/20: Sheaves and Vector Bundles, K-Theory, Mathematical Methods in Machine Learning
ST 2019: Homotopy Theory, Integral Geometry, Probabilistic Combinatorics, Singularities, Probability Theory II
WT 2018/19: High-Dimensional Approximation, Homological Algebra, Tropical Combinatorics, Functional Analysis, Stochastic Processes
ST 2018: Combinatorial Algebra, Mathematical Aspects of Quantum Mechanics, Probability Theory II

Additional Courses in English include:

ST 2022: Mathematics for Cognitive Science (Lectures, 6 ECTS credit points)
ST 2021: Models of the Corona Pandemic (Seminar, MATH-421, 3 ECTS credit points)