Overview Functional Analysis and Geometric Analysis

Module title

Module coordinator
Dean of Studies Mathematik (Mathematics)

Module offered by
Institute of Mathematics

ECTS
12

Method of grading
numerical grade

Only after succ. compl. of module(s)
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Duration
1 semester

Module level
undergraduate

Other prerequisites
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Contents
Banach spaces and Hilbert spaces, bounded operators, principles of functional analysis; fundamentals in analysis on manifolds, submanifolds, calculus of differential forms, Stoke's theorem and applications in vector analysis and topology.

Intended learning outcomes
The student is acquainted with fundamental concepts and methods in functional analysis and geometric analysis. He/She is able to relate these concepts with one another, and realises the advantages of thinking across the borders of different branches in mathematics.

Courses
V (4) + Ü (2)

Method of assessment
oral examination of one candidate each (20 to 40 minutes)
Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).
Language of assessment: German and/or English

Allocation of places
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Additional information
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Referred to in LPO I (examination regulations for teaching-degree programmes)
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Module appears in
Bachelor’ degree (1 major) Mathematics (2015)
Bachelor’ degree (1 major) Computational Mathematics (2015)