

<b>Module title</b>		<b>Abbreviation</b>
Introduction to Functional Analysis		10-M-FAN-152-m01
<b>Module coordinator</b>		<b>Module offered by</b>
Dean of Studies Mathematik (Mathematics)		Institute of Mathematics
<b>ECTS</b>	<b>Method of grading</b>	<b>Only after succ. compl. of module(s)</b>
9	(not) successfully completed	--
<b>Duration</b>	<b>Module level</b>	<b>Other prerequisites</b>
1 semester	undergraduate	--
<b>Contents</b>		
Banach spaces and Hilbert spaces, bounded operators, principles of functional analysis.		
<b>Intended learning outcomes</b>		
The student knows the fundamental concepts and methods of functional analysis as well as the pertinent proof methods, is able to apply methods from linear algebra and analysis to functional analysis, and realises the broad applicability of the theory to other branches of mathematics.		
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)		
V (4) + Ü (2)		
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus		
<b>Allocation of places</b>		
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<b>Additional information</b>		
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<b>Workload</b>		
270 h		
<b>Teaching cycle</b>		
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
§ 22 II Nr. 3 f)		
<b>Module appears in</b>		
Bachelor' degree (1 major) Mathematics (2015) Bachelor' degree (1 major) Mathematical Physics (2015) Bachelor' degree (1 major) Computational Mathematics (2015) First state examination for the teaching degree Gymnasium Mathematics (2015) Bachelor' degree (1 major) Mathematical Physics (2016) First state examination for the teaching degree Gymnasium Mathematics (2019) First state examination for the teaching degree Gymnasium Mathematics (2023) Bachelor' degree (1 major) Mathematics (2023)		