Course Name	Functional analysis 2
Contents and Objectives	<u>Content</u>: Advanced topics in functional analysis are treated • Locally convex vector spaces and operators between these spaces • Duality theory of locally convex spaces • Polar topologies and notions of compactness on primal and dual spaces; characterization of reflexivity • Spaces of (temperate) distributions and their applications Objectives: Students gain knowledge in advanced concepts in functional analysis and their applications to different branches of mathematical analysis (partial differential equations, Fourier analysis etc.). Students are able to rigorously apply sophisticated techniques from functional analysis to concrete problems from mathematical analysis in order to develop solution strategies.
Teaching	This course consists of lectures and exercise classes. • Lecture: Functional analysis 2 (4h/week) • Exercise class: Functional analysis 2 (2h/week) This class can be taught remotely.
Prerequisites	
Verwendbarkeit des Moduls	-
Examination	Oral exam (30 minutes)
Credits	8 ECTS points
Frequency	This course is given at least every second year.
Workload	The estimated total working time for this course is 240 hours.
Duration	This course is given during one semester.