

Study programme(s): Mathematics (MA), Master in Mathematics Teaching(MP)				
Level: Master				
Course title: Functional analysis (MA-05)				
Lecturer: Stevan Pilipović				
Status: obligatory on MA, elective on MP				
ECTS: 7				
Requirements: none				
Learning objectives General principle of analysis, connections of algebraic and topological structures.				
Learning outcomes Students are provided with the general principle of analysis in investigations of sequence and function spaces, and the use of theoretical results in applications to the theory of ODE and PDE.				
Syllabus <i>Theoretical instruction</i> Banach spaces, Spaces of continuous linear operators, Hilbert spaces, Fourier analysis, Basic theorems of functional analysis, Spectral theory of bounded operators. <i>Practical instruction</i> Exercises, students' seminar work.				
Literature 1. Hadžić, O., Pilipović, S., <i>Uvod u funkcionalnu analizu</i> , Novi Sad, 1996. 2. Gajić, Lj., Kurilić, M., Pilipović, S., Stanković, B., <i>Zbirka zadataka iz funkcionalne analize</i> , NoviSad, 2000. 3. Y Eidelman, V. Milman, A. Tsohomites, <i>Functional Analysis: An Introduction</i> , Graduate Studies in Mathematics Vol. 66 (2004). 4. Walter Rudin, <i>Principles of Mathematical Analysis</i> , Mc Graw Hill, 1973. 5. M. Arsenovic, M. Dostanic, Teorija mere, Funkcionalna analiza, Teorija operatora, Matematički fakultet Beograd, 1998.				
Weekly teaching load				Other: 0
Lectures: 3	Exercise: 3	Other forms of teaching: 0	Student research: 0	
Teaching methodology Classical lectures, exercises, students' seminar works.				
Grading (maximum number of points 100)				
Pre-exam obligations	points	Written exam	50	
Colloquia	50	Oral exam	50	