

<b>Study programme(s):</b> Mathematics AN-21			
<b>Level:</b> PhD studies			
<b>Course title:</b> Functional analysis and the operator theory 1			
<b>Lecturer:</b> Stevan Pilipović			
<b>Status:</b> obligatory			
<b>ECTS:</b> 10			
<b>Requirements:</b> none			
<b>Learning objectives</b> General principle of analysis, connections of algebraic and topological structures in the study of function spaces			
<b>Learning outcomes</b> Analysis of spaces as an introduction in the operator theory and generalized functions. Applications in the theory of partial differentialequations			
<b>Syllabus</b> <i>Theoretical instruction</i> Topological vector and locally convex spaces. The space of continuos linear operators. Dual spaces. Main theorems of functional analysis <i>Practical instruction</i> Seminar work of a student			
<b>Literature</b> Meise, R. Vogt, D., Introduction to functional analysis, Oxford Graduate Texts in Mathematics, 2. The Clarendon Press, Oxford University Press, New York, 1997. 437 pp Walter Rudin, Functional Analysis, Mc-Graw Hill, New York H.Schaefer, Topological Vector Spaces, Mac-Millan, NewYork, 1966 Y Eidelman, V. Milman, A. Tsolomites, Functional Analysis An Introduction, Graduate Studies in Mathematics V66 (2004)			
<b>Weekly teaching load</b>			<b>Other:</b> 0
Lectures: 2	Exercise: 0	Other forms of teaching: 0	Student research: 6
<b>Teaching methodology</b> Classical lectures, exercises, students seminar works			
<b>Grading method (maximal number of points 100)</b>			
<b>Pre-exam obligations</b>	<b>points</b>	Written exam	50
		Oral exam	50