

Course: Functional analysis 2		
Teacher(s): Snežana Živković Zlatanović, Nebojša Dinčić		
Course status:	Elective	
ECTS:	12	
Prerequisites:	None	
Goal		
Mastering advanced results in functional analysis and operator theory.		
Outcomes		
Student can prove result using analytic functional calculus in Banach algebras, spectral representation of selfadjoining and normal operators on Hilbert spaces, and representation theorem for commutative Banach and C*-algebras.		
Contents		
<i>Теоријска настава</i>		
Analytic functional calculus in Banach algebras. Spectral mapping theorem.		
Spectral representation of bounded and unbounded selfadjoint and normal operators on Hilbert spaces.		
Commutative Banach and C*-algebras. Maximal ideals. Gelfand representation theorem.		
Recommended bibliography		
1. С. Курепа: <i>Функционална анализа, елементи теорије оператора</i> , Школска књига, Загреб, 1980.		
2. E. Kreyszig: <i>Introductory functional analysis with applications</i> , Wiley, 1989.		
3. F. F. Bonsall, J. Duncan, <i>Complete normed algebras</i> , Springer, 1973.		
4. I. Gohberg, S. Goldberg, M. Kaashek, <i>Classes of linear operators</i> , vol 1. and vol. 2, Birkhauser, 1990.		
Number of classes per week	Theoretical: 4	Practical:
Methods of teaching		
Group, individual, interactive.		
Knowledge rating (max 100 points)		
Knowledge estimation:		
Seminars: 30 points		
Final exam: 70 points		