Study programme(s): Mathematics (MD)	
Level: PhD studies	
Course title: Topology 3 (AN-17)	
Lecturer: Olga L. Hadžić	
Status: elective	
ECTS: 10	
Requirements:	

Learning objectives
Introduction to the notion of compactness and its generalizations.

Learning outcomes
Minimal:
At the end of the course students are expected to show understanding of topics in topology covered during the course, through proofs of the main theorems and topological analysis of a given space.
Desirable:
At the end of the course students are expected to show deeper understanding of topics in topology covered during the course, through proofs of the main theorems and topological analysis of a given space, knowledge of standard examples and applications of the acquired knowledge in other fields of mathematics.

Syllabus

Compactness. Local compactness. k-spaces. Compactifications. Stone-Čech compactifications. Lindelöf spaces. Čech-complete spaces. Baire's theorem. Countably compact, pseudocompact and sequentially compact spaces. Real complete spaces. Spaces of mappings: compactly-open topology. Ascoli's theorem.

Literature

1. R. Engelking, *General Topology*, Heldermann Verlag, Berlin, 1989. R. Engelking, General Topology, Heldermann Verlag, Berlin, 1989.
2. Kelley J.L., *General Topology*, D. Van Nostrand Comp. Inc., Princeton, New Jersey, 1957, [руски превод са додатком А. В. Архангел'ског: Наука, Москва, 1980.]
3. Kuratowski K., *Topology* I-II, Academic Press, New York; PWN, Warszawa, 1966. [руски превод: Мир, Москва, 1966.]

Weekly teaching load				Other: 0
Lectures: 2	Exercises 0	Other forms of teaching: 0	Student research: 6	

Teaching methodology

Plenary lectures, problem sessions, independent presentations carried out by students.

Grading method (maximal number of points 100)			
Pre-exam obligations	**points**	**Final exam**	**points**
Colloquia	50	Oral exam	50