

Study programme(s) : Mathematics (MD)			
Level: doctoral			
Course title: Fuzzy Set Theory II (AL-14)			
Lecturer: Andreja Tepavčević			
Status: optional			
ECTS: 10			
Requirements: none			
Learning objectives The course aims to provide Ph.D.-students with a thorough knowledge of. the advanced concepts of fuzzy set theory and its generalizations			
Learning outcomes <i>minimal:</i> Students should acquire thorough knowledge of notions of advanced fuzzy sets theory <i>desirable:</i> Students should develop ability to solve individually and creatively advanced problems of fuzzy sets theory and ability to solve advanced non typical problems.			
Syllabus Residuated lattices, characterisations of complete distributivity, BL-algebras, MV-algebras, pseudo boolean algebras. Fuzzy topological spaces. Multi choice principle and neighborhood structures. Continuous mappings. Subspaces. L-valued stratifications spaces. Compactness in fuzzy topological spaces.			
Literature 1. Belohlavek, R.: Fuzzy Relational System, Kluwer Academic Publishers, Dordrecht 2002. 2. Liu Ying-Ming, Luo Mao-Kang, Fuzzy Topology, World Scientific, Singapor, 1997. Esko Turunen, Mathematics behind fuzzy logic, Physica Verlag 1999.			
Weekly teaching load			Other: 0
Lectures: 2	Exercises 0	Other forms of teaching: 0	Student research: 6
Teaching methodology Theoretical lectures with permanent interactions with students.			
Grading method (maximal number of points 100)			
Pre-exam obligations	points	Final exam	points
Colloquia	40	Oral exam	60