

Study programme(s) : Mathematics (MD)			
Level: doctoral			
Course title: Lattice Theory I (AL-08)			
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 classical lattice theory, and its applications to mathematics.			
Learning outcomes <i>minimal:</i> Students should acquire thorough knowledge of fundamental notions from lattice theory and properties of lattices <i>desirable:</i> Students should develop ability to solve individually and creatively advanced problems of lattice theory and also problems connected with its applications to mathematics			
Syllabus Ordered sets and lattices. Lattices as algebras. Complete lattices, algebraic lattices, closure operators, completeness. Modular lattices. Distributive lattices. Complemented and boolean lattices. Representation theorems. Free lattices. Varieties of lattices.			
Literature 1.B. Šešelja, Lattice Theory, Departman of Mathemataics and Informatics, Faculty of Science, Novi Sad, 2006 (in Serbian), 2. B.A. Davey, H.A. Priestley, Introduction to lattices and order. Cambridge Mathematical Textbooks, Cambridge University Press, Cambridge, 1990. 3. G. Gratzer, General Lattice Theory, Second edition, Birkhauser, 2003. 4. G. Birkhoff, Lattice Theory, 3ed, AMS, 1967. 5. R. Freese, J. Jezek, J. B. Nation, Free lattices, Mathematical Surveys and Monographs, 42. American Mathematical Society, Providence, RI, 1995.			
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