

Title of the course: Models of set theory		
Course instructor: Stevo Todorčević		
Status of the course: non-obligatory		
Number of ESPB points:		
Prerequisites: none.		
Aim of the course: Students should get familiar with methods of constructing models of set theory (forcing and inner models).		
Expected results of the course: At the end of the course a student is expected to show understanding of covered material in set theory through presenting proofs of theorems and familiarity with basic methods in this area.		
Syllabus: <i>Lectures:</i> Souslin problem. Trees. Diamond principle, and diamond plus. Transitive models of set theory. Relativization and absoluteness. Constructible sets and consistency of the theory ZFC+GCH. Complete Boolean algebras. Boolean-valued models. Generic extensions. Forcing. Independence of the Continuum hypothesis and Axiom of choice. Forcing and infinitary combinatorics. Applications of forcing. Measure problem and measurable cardinals.		
Recommended literature: <ol style="list-style-type: none"> 1. Thomas Jech, Set Theory, Springer, 1997. 2. Kenneth Kunen, Set Theory: an Introduction to Independence Proofs, North-Holland, 1980. 3. Frank R. Drake: Set Theory: an Introduction to Large Cardinals, North-Holland, 1974. 		
Number of teaching hours:	Lectures:	Tutorial: --
Methods of teaching: Lectures, problem-solving, and student presentations.		
Grade (maximum number of points 100) Seminar or homework: 50 points. Oral exam: 50 points.		