

<b>Study programme(s):</b> Mathematics (PhD studies)			
<b>Level:</b> PhD studies			
<b>Course title:</b> Model theory 2 (AL07)			
<b>Lecturer:</b> Maja A. Pech, Boris B. Šobot			
<b>Status:</b> elective			
<b>ECTS:</b> 7			
<b>Requirements:</b> none			
<b>Learning objectives</b> Introducing some advanced topics of model theory.			
<b>Learning outcomes</b> Knowledge of advanced topics and ability to apply them to specific examples.			
<b>Syllabus</b>  Ultraproducts. Łos's theorem. Measurable cardinals. Saturated models. Horn sentences. Limit ultrapowers and complete extensions. Iterated ultrapowers. Two-cardinal theorems. Finite model theory.			
<b>Literature</b> <ol style="list-style-type: none"> <li>1. W. Hodges, <i>A Shorter Model Theory</i>, 1997.</li> <li>2. C. C. Chang, H. J. Keisler, <i>Model Theory</i>, North-Holland, 1973</li> <li>3. Žarko Mijajlović: <i>An Introduction to Model Theory</i>, Novi Sad, 1987.</li> </ol>			
<b>Weekly teaching load</b>			Other:
Lectures: 2	Exercises :0	Other forms of teaching: 0	Student research: 6
0			
<b>Teaching methodology</b> Lectures are presented using classical teaching methods supported by beamer presentations and continuous interaction with students. The ability of application of theoretical knowledge is checked through independent solving of exercises on two colloquia. The final exam is oral and a student is supposed to demonstrate general understanding of the presented theoretical material.			
<b>Grading method (maximal number of points 100)</b>			
<b>Pre-exam obligations</b>	<b>points</b>	<b>Final exam</b>	<b>points</b>
Colloquia	50	Oral exam	50