

<b>Study programme(s):</b> Mathematics (MA)			
<b>Level:</b> master			
<b>Course title:</b> Graph Theory (MA-11)			
<b>Lecturer:</b> Vojislav Petrović			
<b>Status:</b> elective			
<b>ECTS:</b> 5			
<b>Requirements:</b> none			
<b>Learning objectives:</b> Basic concepts and proof techniques. Graph algorithms and applications.			
<b>Learning outcomes:</b> Students are expected to be able to prove most of standard theorems in Graph Theory and to solve related problems.			
<b>Syllabus:</b> <i>Theoretical instruction</i> Terminology and basic concepts. Trees. Eulerian and Hamiltonian graphs. Matchings. Planar graphs. Graph colourings. Digraphs. <i>Practical instruction</i> Solving various problems using theoretical results.			
<b>Literature:</b> 1. J. A. Bondy and U.S.R. Murty, <i>Graph Theory</i> , Series: Graduate Texts in Mathematics, Vol. 244, Springer, 2008. 2. I. Bošnjak, D. Mašulović, V. Petrović, R. Tošić, <i>Zbirka zadataka iz teorije grafova</i> , Univerzitet u Novom Sadu, 2005. 3. G. Chartrand, L. Lesniak, <i>Graphs &amp; Digraphs</i> , Chapman & Hall, London 2005. 4. D. West, <i>Introduction to Graph Theory</i> , Second Edition, Prentice Hall, 2001. 5. V. Petrović, <i>Teorija grafova</i> , Univerzitet u Novom Sadu, 1998.			
<b>Weekly teaching load:</b>			Other: 0
Lectures: 2	Exercises: 2	Other forms of teaching: 0	Student research: 0
<b>Teaching methodology:</b> Classical teaching supported by PowerPoint presentations. Exercises consist of analyzing and solving typical problems. Two written colloquia and final oral exam.			
<b>Grading (maximum 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