

<b>Study Programme:</b> Mathematics, Applied Mathematics			
<b>Course Unit Title:</b> Decision Theory			
<b>Course Unit Code:</b> MB45			
<b>Name of Lecturer(s):</b> Ivana Štajner-Papuga			
<b>Type and Level of Studies:</b> Master Academic Degree			
<b>Course Status (compulsory/elective):</b> elective			
<b>Semester (winter/summer):</b> summer			
<b>Language of instruction:</b> Serbian			
<b>Mode of course unit delivery (face-to-face/distance learning):</b> Face-to-face			
<b>Number of ECTS Allocated:</b> 5			
<b>Prerequisites:</b> None			
<b>Course Aims:</b> Acquiring basic knowledge and skills in classical decision making methods as well as in methods based on utility functions, aggregation operators and non-additive measures.			
<b>Learning Outcomes:</b> Successful students will be able to recognize the type of a problem and to apply techniques studied during the course.			
<b>Syllabus:</b>			
<ul style="list-style-type: none"> <li>• Decision Process -the standard representation</li> <li>• Decision-making under uncertainty</li> <li>• Decision-making under risk</li> <li>• Utility function - Von Neuman-Morgenstern theory</li> <li>• Aggregation operators</li> <li>• Non-additive measures</li> </ul>			
<b>Required Reading:</b>			
1. M. Peterson, An Introduction to Decision Theory. Cambridge University Press, 2009 –selected chapters			
2. M. Grabisch, J. L. Marichal, R. Mesiar, E. Pap, Aggregation Functions, Cambridge University Press, Encyclopedia of Mathematics and Its Applications 127, 2009 –selected chapters			
3. M. Grabisch, H.T. Nguyen, E.A. Walker. Fundamentals of Uncertainty Calculi, with Applications to Fuzzy Inference. Kluwer Academic, 1995 –selected chapters			
4. E. Pap, Fazi mere i njihova primena, Univerzitet u Novom Sadu, PMF, Novi Sad, 1999. –selected chapters			
<b>Weekly Contact Hours: 4</b>	<b>Lectures: 2</b>	<b>Practical work: 2</b>	
<b>Teaching Methods:</b> classical teaching method - lectures and exercises; students' presentations of their team work on selected subjects.			
<b>Knowledge Assessment (maximum of 100 points): 100</b>			
<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Active class participation		written exam	
Practical work		oral exam	
Preliminary exam(s)		.....	
Seminar	60	Seminar presentation	40
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			