

(Table 5.2) Course unit description

Study program: Economics and business management and Business Informatics			
Type and level of studies: Undergraduate studies			
Course unit: Operational Research			
Teacher in charge: Predrag Mimović			
Language of instruction: English			
ECTS: 7			
Prerequisites: Basic knowledge in mathematical calculus			
Semester: Summer			
Course unit objective: The objective of the course is to introduce concept of optimization and its wide applicability to solving problems from fields of Economics and Finance. It is to provide the quantitative base for informed decision making.			
Learning outcomes of Course unit Be able to understand concepts of optimization. Be able to derive models, both within deterministic and stochastic setup, which encompass different confronting objectives and constraints of a real problem. Be able to interpret solutions and make business decisions based on obtained solutions. Be able to apply ex-post sensitivity analysis.			
Course unit contents Linear programming -Simplex method Duality Theory Transportation and Assigning problem Game Theory Network optimization Models Inventory Theory Queueing Theory			
Literature <ol style="list-style-type: none">1. Render, B., Stair JR., R.M. & Hanna, M.E. (2009). Quantitative Analysis for Management. Pearson, Prentice Hall.2. Hillier, S.F. & Lieberman, G.J. (2005). Introduction to Operations Research 8th edition. McGraw-Hill;3. Anderson, D.R., Sweeney, D.J. & Williams, T.A. (2003). An introduction to management science: quantitative approach to decision making. Thomson, South-western;			
Number of active teaching hours			Other classes
Lectures: 3	Practice: 2	Other forms of classes	
			Independent work
Teaching methods			
Examination methods (maximum 100 points)			
Exam prerequisites	No. of points:	Final exam	No. of points:
Student's activity during lectures	5		30
practical classes/tests			
Seminars/home work			
Colloquiums	65		
Other			