

Study program: Business Informatics			
Type and level of studies: Master studies			
Course unit: Operations Research 2			
Teacher in charge: Mimović Predrag			
Language of instruction: English			
ECTS:8			
Prerequisites:			
Semester: Summer Semester			
Course unit objective			
The aim of the course is for students to master modern mathematical models and methods of optimizing business and production decisions, as well as the application of available software.			
Learning outcomes of Course unit			
Students are trained to use quantitative scientific methods to create a realistic quantitative basis that will enable the acceptance and making of optimal business decisions.			
Course unit contents			
Combined problems of linear programming. Parametric linear programming - sensitivity of the optimal solution. Integer linear programming and applications. Nonlinear programming. Data Envelopment Analysis (DEA). Complex problems of transport models. Network and project planning (programming). Elements of probability theory. Markov chains and applications. Stochastic stock problems. Queues - simulations.			
Practical teaching:			
Case study presentations and discussion.			
Software			
Microsoft Excel and DEA software packages.			
Literature			
1. Albright, C.S., Winston, W.L. (2012): <i>Management Science Modeling</i> , South – Western.			
2. Render, B., Stair, R.M., Hanna, M.E. (2009): <i>Quantitative Analysis for Management</i> , Pearson Education International.			
3. Cooper, W., Seiford, L., Tone, K. (2007): <i>Data envelopment analysis. A Comprehensive Text with Models, Applications, References and DEA-Solver Software</i> , Springer.			
Number of active teaching hours			Other classes: 1
Lectures: 3	Practice: 2	Other forms of classes: Independent work:	
Teaching methods: Lectures. Consultations. Mentorship. Software Support - Excel OM, DEASolver LV8.			
Examination methods (maximum 100 points)			
Exam prerequisites	No. of points:	Final exam	No. of points:
Student's activity during lectures	5	Verbal examination	10
practical classes/tests	5	Written examination	50
Seminars/homework	30	
Projects	-		
Other			
Grading System			
Grade	No. of points	Description	
10	91-100	Excellent	
9	81-90	Exceptionally good	
8	71-80	Very good	
7	61-70	Good	
6	51-60	Passing	
5	Under 50	Failing	