

Study program: Mechanical Engineering			
Type and level of studies: MSC			
Course unit: Production Organization and Operational Research			
Teacher in charge: Tadić, P. Danijela			
Language of instruction: English			
ECTS: 6			
Prerequisites: no			
Semester: <i>Winter semester</i>			
Course unit objective:			
The course objective is that students master the basic knowledge from the production management, including the methods of operational research. The emphasis is especially set on the fact that in a company any type of activity can be performed, both industrial and any other production activity.			
Learning outcomes of Course unit			
After the passed final exam student should understand the principles of the production management and master the methods of operational research.			
Course unit contents			
<i>Theoretical classes</i>			
The course study include the following units: Introduction to production organization, Capacities planning, Linear programming, Dual task of linear programming, Production Planning and organization, Nonlinear programming, Supplies management, Planning according to materials requirement, JIT system for production planning, production scheduling.			
<i>Practical classes</i>			
Application of theoretical knowledge and skills to solve real life problems; case studies, simulations, tests and games in the field of Operational Research. Work in groups.			
Literature			
[1] Tadić, D. et al., "Operational Research", Faculty for Industrial Management, ICIM Plus, Kruševac, 2005. (In Serbian)			
[2] Christian Albright, Wayne Winston, Business Analytics Data Analysis & Decision Making, 6th Edition, Cengage, 2017			
Number of active teaching hours			Other classes 1
Lectures: 2	Practice: 2	Other forms of classes: mentoring system	
Teaching methods			
Teaching is comprised of lecturing by the use of modern teaching resources - video presentations and educational films and oral exercises. Evaluation of knowledge: tests and seminar.			
Examination methods (maximum 100 points)			
Exam prerequisites	No. of points:	Final exam	No. of points:
Student's activity during lectures	10	oral examination	30
practical classes/tests	30	written examination	
Seminar/homework	25	
Seminar presentation	5		
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	≤50	Failing	