

Operations Research I Course

<i>Name of the subject:</i> Operations Research 1 - BSc	<i>SUBJECT code:</i>	Weekly hours: 3 lecture + 3 practical work	Credit: 8
<i>Subject leader:</i> Dejan Bogdanovic (Sanela Arsic)	<i>Academic Degree:</i> Associate Professor (Assistant)	<i>Prerequisites:</i> Knowledge in mathematics statistics and production management	

Purpose: Knowledge acquisition in operational research methods and their application for solving practical organizational problems.

Course description: Linear programming, transportation problem, assignment methods, application of linear programming, Integer linear programming, nonlinear programming, dynamic programming, optimal reservation

Schedule

Weeks	Topics
1.	Linear programming – Graphic method
2.	Linear programming – Simplex max method
3.	Linear programming – Simplex max method
4.	Linear programming – Simplex max method
5.	Linear programming – Simplex min method
6.	Linear programming – Dual method
7.	Transportation problem
8.	Transportation problem
9.	Assignment methods
10.	Integer linear programming
11.	Application of linear programming
12.	Nonlinear programming
13.	Dynamic programming
14.	Optimal reservation

Final grade:

Activity during the lectures - 10 points

Colloquium – 40 points

Seminary work – 10 points

Written examination – 20 points

Oral examination – 20 points

Number of points and mark: 51-60 (Mark 6), 61-70 (Mark 7), 71-80 (Mark 8), 81-90 (Mark 9) and 91-100 (Mark 10)

Compulsory literature:

W. Winston, Operations Research (Applications and Algorithms), Indiana University, 2004.

Supplemental literature:

1. Chase, Operations management for competitive advance, Дата Статус, Београд, 2005.
2. M.W.Carter, C.C.Price, Operations Research – a practical introduction, CRC Press, New York, 2001.