

OPERATIONAL RESEARCH

Degree(s)	: Management
Type	: Compulsory course unit
Curricular year/semester	: 3rd year – 1st / 2nd Semester
ECTS / hours per week	: 6 ECTS / 4.0 Hours
Workload per Week	: 2Theoretical/Practical x 2Hours
Teacher responsible	: Professor Margarida Vaz Pato (1st Semester) : Professor Margarida Carrapa (2nd Semester)

OBJECTIVES

- Introduce the students to the wide field of applications for (integer) linear programming and network models, as well as provide basic knowledge of the respective mathematical models.
- Apply very simple algorithms and dominate the resolution of (integer) linear programming problems with the Solver/Excel software, giving to the economic interpretation of results.

PROGRAM

- Simplex Method
- Duality and Sensitivity Analysis
- Transportation and Assignment Problems
- Network Optimization
- Integer Linear Programming

BIBLIOGRAPHY

Recommended Bibliography:

- F.S. Hillier, G.J. Lieberman, Introduction to Operations Research, 9th edition, McGraw-Hill, International Edition, New York, 2010
- M.C. Mourão, L. Santiago Pinto, O. Simões, J. Valente, M.V. Pato, Investigação Operacional: Exercícios e Aplicações, 1ª edição, Verlag Dashöfer, Lisboa, 2011