Summary
This course is dedicated to various modelling tools, optimization methods and decision analysis techniques, with a specific focus on logistics.

Content
Introduction to operations research and graph coloring, linear programming, flow theory, graph covering models (with applications in network design, distribution and transportation), distribution, heuristic methods and vehicle routing problems, facility location problems, job shop, facility layout, balancing an assembly line, open shop.

Keywords
Modelling techniques, operations research

Learning Outcomes
By the end of the course, the student must be able to:
• Represent some important logistical problems by the use of operations research models.
• Solve such problems with exact methods or heuristics.
• Classify optimization problems

Transversal skills
• Summarize an article or a technical report.
• Access and evaluate appropriate sources of information.

Teaching methods
Lectures, with theoretical parts and various exercises

Expected student activities
Attendance at lectures and completing exercises

Assessment methods
Two written exams, no documentation allowed:
40% mid-term exam
60% final exam
Office hours  |  No  
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Assistants  |  Yes  
Forum  |  No  
Others  |  Available if firstly contacted by e-mail  

**Resources**  
**Notes/Handbook**  
All the documents will be provided in PDF format