

# UE Advanced models and methods in operations research



Level  
Baccalaureate  
+5



ECTS  
6 credits



Component  
UFR IM2AG  
(informatique,  
mathématiques  
et  
mathématiques  
appliquées)



Semester  
Automne

- > **Teaching language(s):** English
- > **Teaching method:** In person
- > **Open to exchange students:** Yes
- > **Code d'export Apogée:** GBX9CO01

## Presentation

### Description

This course presents advanced methods and technics for Operations Research.

Reminder :

Linear Programming, Dynamic Programming, MIP modelling and BB  
Complexity (P, NP, Co-NP)

Advanced MIP :

formulation, cuts, bounds  
applications  
lagrangian relaxation  
column generation  
Benders decomposition  
Solvers

Constraint Programming

Heuristics

local search

approximation algorithms

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## Course parts

CM Lectures (CM) 36h

**Period** : Semester 9

Seconde chance / Session de rattrapage - Épreuves

Libellé	Nature de l'enseignement	Type d'évaluation	Nature de l'épreuve	Durée (en minutes)	Nombre d'épreuves	Coefficient de l'épreuve	Remarques
				80			

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## Useful info

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### Contacts

Program director

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### Place

› Grenoble

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### Campus

› Grenoble - University campus