

UE Operations Research



Niveau d'étude
Bac +4



ECTS
3 crédits



Crédits ECTS
Echange
3.0



Composante
UFR IM2AG
(informatique,
mathématiques
et
mathématiques
appliquées)



Période de
l'année
Printemps (janv.
à avril/mai)

- > **Langue(s) d'enseignement:** Anglais
- > **Ouvert aux étudiants en échange:** Oui
- > **Crédits ECTS Echange:** 3.0
- > **Code d'export Apogée:** GBX8MO11

Présentation

Description

Skills

- Recognize a situation where Operations Research is relevant.
- Know the main tools of Operations Research.
- Have the methodological elements to choose the solution methods and the tools the most adapted for a given practical problem.
- Know how to manipulate the software tools to solve a discrete optimization problem.

The course covers various topics:

- Linear Programming (modelling, solving, duality)
- Mixed Integer Linear Programming (modelling techniques, solving with Branch and Bound)
- Dynamic Programming
- Bonus (riddles, elsewhere on the web, OR News)

More details : <https://moodle.caseine.org/course/view.php?id=42>

Objectifs

Operations Research offers scientific methods for better decisions. The idea is to develop and use mathematics and informatics tools to solve complex organization problems. Historical applications are in the management of large systems of humans, machines, materials in industry, service, humanitarian aid, environment...

At the end of this course, students should be able to propose a modelization and implement practical solutions (dedicated or industrial tools) to solve a decision or optimization problem. Interested students can continue in master 2 Operations Research, Combinatorics and Optimization (ORCO).

Heures d'enseignement

CM	CM	16,5h
TD	TD	16,5h

Pré-requis recommandés

Aucun pré-requis nécessaires mais une bonne compréhension des cours d'algorithmique est un plus.

Période : Semestre 8

Infos pratiques

Contacts

Responsable pédagogique

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Campus

› Grenoble - Domaine universitaire