UE Optimization under uncertainty

Level
Baccalaureate +5

ECTS
6 credits

Component
UFR IM2AG (informatique, mathématiques et mathématiques appliquées)

Semester
Automne

- **Teaching language(s):** English
- **Teaching method:** In person
- **Teaching type:** Lectures
- **Open to exchange students:** Yes
- **Code d'export Apogée:** GBX9CO03

Presentation

Description

The objective of this course is to present different techniques to handle uncertainty in decision problems. These techniques will be illustrated on several applications e.g. inventory control, scheduling, energy, machine learning.

Syllabus : Introduction to uncertainty in optimization problems; Reminders (probability, dynamic programming, ...); Markov chains; Markov decision processes; Stochastic programming; Robust optimization

Course parts

CM	Lectures (CM)	36h

Recommended prerequisites

Basic courses in probability and linear programming

Period : Semester 9

Useful info

Contacts

Program director

Bruno Gaujal

Program director

Moritz Muhlenthaler

Place

Grenoble

Campus

Grenoble - University campus