

UE Learning, Probabilities and Causality



Level
Baccalaureate
+5



ECTS
6 credits



Component
UFR IM2AG
(informatique,
mathématiques
et
mathématiques
appliquées)



Semester
Automne

- > **Teaching language(s):** English
- > **Open to exchange students:** Yes
- > **Code d'export Apogée:** GBX9AM77

Presentation

Description

Causality is at the core of our vision of the world and of the way we reason. It has long been recognized as an important concept and was already mentioned in the ancient Hindu scriptures: "Cause is the effect concealed, effect is the cause revealed". Even Democritus famously proclaimed that he would rather discover a causal relation than be the king of presumably the wealthiest empire of his time. Nowadays, causality is seen as an ideal way to explain observed phenomena and to provide tools to reason on possible outcomes of interventions and what-if experiments, which are central to counterfactual reasoning, as "what if this patient had been given this particular treatment?"

Objectives

The main aim of this course is to provide the principles and tools to understand and master learning models based on probabilities and causality.

Course parts

| | | |
|----------------|---------------------|-----|
| CM | Lectures (CM) | 36h |
| Practical work | Practical work (TP) | 18h |

Recommended prerequisites

Probability and statistics background.

Useful info

Contacts

Program director

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Campus

› [Grenoble - University campus](#)