

Probability and stochastic modelling

Code: 100104
ECTS Credits: 8

Degree	Type	Year	Semester
2500149 Mathematics	OB	3	1

Contact

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Use of languages

Principal working language: catalan (cat)

Some groups entirely in English: No

Some groups entirely in Catalan: Yes

Some groups entirely in Spanish: No

Prerequisites

Calculus in several variables and optimization. Mathematical Analysis

Objectives and Contextualisation

The applications of probability include practically all the sciences and the technology, being also the theoretical basis of many of them. In this course we will focus both on the theory (development of the mathematical structure) and on the most applied aspects of modeling (find the right probability space) of real problems and their resolution.

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Content

- 1. Probabilistic models**
- 2. Random variables and vectors**
- 3. Mathematical expectation**
- 4. Convergence of sequences of random variables**
- 5. Limit theorems of Probability Theory**