

**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 models. In this course we will focus both on the theory (development of the mathematical

and on the most applied aspects of modeling (find the right probability space) of real problems and their resolution.

## **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**