

Bachelor's degree in Statistics (interuniversity UB-UPC degree)

The **bachelor's degree in Statistics**, coordinated by the Universitat de Barcelona (UB) and with the UPC as a participant, will provide you with the training you need in statistics, probability, operations research, computer science and economics. The course will give you the necessary grounding to design methods for collecting and transforming data into valuable decision-making input for companies, organisations and institutions; to manage quality control and improvement processes; and to produce public opinion studies, statistical reports, epidemiological studies and clinical trials in the field of health care. The course is offered jointly with the [University of Barcelona](#) (UB), so students reap the rewards of a richer learning experience, benefiting from the combined expertise of UPC and UB teaching staff in engineering and technology, economics, and social and health sciences.

GENERAL DETAILS

Duration

4 academic years

Study load

240 ECTS credits (including the bachelor's thesis). One credit is equivalent to a study load of 25-30 hours.

Delivery

Face-to-face

Language of instruction

Check the language of instruction for each subject (and timetable) in the course guide in the curriculum.

Information on [language use in the classroom and students' language rights](#).

Fees and grants

Approximate fees per academic year: €1,107 (€2,553 for non-EU residents). [Consult the public fees system based on income \(grants and payment options\)](#).

Location

[School of Mathematics and Statistics \(FME\)](#)

Official degree

[Recorded in the Ministry of Education's degree register](#)

ADMISSION

Places

50

Registration and enrolment

[What are the requirements to enrol in a bachelor's degree course?](#)

Legalisation of foreign documents

All documents issued in non-EU countries must be [legalised and bear the corresponding apostille](#).

PROFESSIONAL OPPORTUNITIES

Professional opportunities

- Health and natural sciences: health services, medicine, public health, pharmaceutical industry, clinical trials,

animal health, environment, life sciences, bioinformatics and agriculture.

- Data Science
- Economics and finance: actuarial science, insurance, banking, risk assessment and lending, stock markets, management of securities portfolios, financial analysis, market research, competitor analysis and pricing policy.
- Public administration: activities at official statistics institutes, demographic projections, studies of social trends and the labour market, optimal allocation of resources, etc.
- Industry and services (including informatics): experimental design, quality control, improvement of processes and products, logistics, inventory management, production planning, and optimal management of resources and energy systems.
- Teaching and research.

ORGANISATION: ACADEMIC CALENDAR AND REGULATIONS

Academic calendar

[General academic calendar for bachelor's, master's and doctoral degrees courses](#)

Academic regulations

[Academic regulations for bachelor's degree courses at the UPC](#)

Language certification and credit recognition

Queries about [language courses and certification](#)

School of Mathematics and Statistics (FME)

CURRICULUM

Subjects	ECTS credits	Type
FIRST COURSE		
Descriptive Statistics	6	Compulsory
Fundamentals of Business Administration	6	Compulsory
Introduction to Calculus	6	Compulsory
Introduction to Informatics	6	Compulsory
Introduction to Operations Research	6	Compulsory
Introduction to Probability	6	Compulsory
Introduction to Statistical Inference	6	Compulsory
Linear Algebra	6	Compulsory
Principles of Economics	6	Compulsory
Programming	6	Compulsory
SECOND COURSE		
Integer and Linear Programming	6	Compulsory
Multivariable Calculus	6	Compulsory
Numerical Methods	6	Compulsory
Official Statistics	6	Compulsory
Probability and Stochastic Processes	6	Compulsory
Sampling Methods	6	Compulsory

Subjects	ECTS credits	Type
Statistical Inference	6	Compulsory
Statistical Software	6	Compulsory
Statistics for Quality Management	6	Compulsory
Survey Design	6	Compulsory
THIRD COURSE		
Bayesian Methods	6	Compulsory
Econometrics	6	Compulsory
Experimental Design	6	Compulsory
Files and Databases	6	Compulsory
Linear Models	6	Compulsory
Multivariate Analysis	6	Compulsory
Non-Linear Programming and Network Flows	6	Compulsory
Non-Parametric and Resampling Methods	6	Compulsory
Queueing Theory and Simulation	6	Compulsory
Statistics for Biosciences	6	Compulsory
FOURTH COURSE		
Demography	6	Optional
Engineering Optimisation	6	Optional
Financial Optimisation	6	Optional
Game Theory and Applications i Economics	6	Optional
Generalised Linear Models	6	Compulsory
Industrial Statistics	6	Optional
Medical Statistics	6	Optional
Practicum I	6	Optional
Practicum II	6	Optional
Statistical Methods for Data Mining	6	Optional
Statistical Methods for Finance and Insurance	6	Optional
Statistical Methods for Marketing	6	Optional
Statistics for Quality Improvement	6	Optional
Survival Analysis	6	Optional
Time Series Analysis	6	Compulsory
Bachelor's Thesis	18	Project