

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 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

Fees and grants

Approximate fees per academic year: €1,502 (€2,253 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 |
| Statistical Inference | 6 | Compulsory |
| Statistical Software | 6 | Compulsory |
| Statistics for Quality Management | 6 | Compulsory |
| Survey Design | 6 | Compulsory |

| Subjects | ECTS credits | Type |
|---|--------------|------------|
| 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 |
| 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 |