Bachelor's degree in Food Engineering

The **bachelor's degree in Food Engineering** combines training in technology and engineering with food science with the aim of producing graduates who have technical skills and a capacity for innovation in the food industry. You will acquire the knowledge to design, plan and manage food transformation and processing, quality control and food safety. You will receive multidisciplinary training in areas such as microbiology, biochemistry, food analysis, food processing operations, preservation techniques, sensory analysis and the design of new food products. You will also learn the technological fundamentals of engineering as applied to the design and use of facilities and equipment in the food industry.

The programme includes laboratory, pilot plant and computer practicals that provide training in food science and technology and the economic viability of food companies.

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

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
Barcelona School of Agri-Food and Biosystems Engineering (EEABB)

Official degree
Recorded in the Ministry of Education's degree register

ADMISSION

Places
55

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

- Technical management of companies and industries in the food sector.
- Sales and marketing in food industries.
- Management and control of food production processes in dairies, meat processing, canning, mining, fishing,

etc.

- Research, design and technological development of new food products.
- Freelance work: projects, consultancy, advice, appraisal, site management, environmental studies, etc.

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

Barcelona School of Agri-Food and Biosystems Engineering (EEABB)

CURRICULUM

Subjects	ECTS credits	Type
FIRST SEMESTER		
Chemistry I	6	Compulsory
Drawing for Engineering	6	Compulsory
General Biology	6	Compulsory
Mathematics I	6	Compulsory
Physics I	6	Compulsory
SECOND SEMESTER		
Chemistry II	6	Compulsory
Earth Sciences	6	Compulsory
Mathematics II	6	Compulsory
Physics II	6	Compulsory
Plant Biology	6	Compulsory
THIRD SEMESTER		
Business Economics and Management	6	Compulsory
Energy Systems and Components	6	Compulsory
Geomatics	6	Compulsory
Hydraulics	6	Compulsory
Statistics	6	Compulsory
FOURTH SEMESTER		
Animal Production	6	Compulsory
Food Analysis	6	Compulsory
Fundamentals of Biochemistry and Microbiology	6	Compulsory
Market Analysis and Agricultural Valuation	6	Compulsory
Plant Production	6	Compulsory

Subjects	ECTS credits	Type
FIFTH SEMESTER		
Extraction and Fermentation Industries	6	Compulsory
Food Chemistry and Biochemistry	6	Compulsory
Food Microbiology	6	Compulsory
Food Preservation Technology	6	Compulsory
Unit Operations in the Food Industry	6	Compulsory
SIXTH SEMESTER		
Construction and Structural Design	6	Compulsory
Environmental Management of Food Industries	6	Compulsory
Food Industry Design	6	Compulsory
Food Processing Operations	6	Compulsory
Meat and Dairy Industries	6	Compulsory
SEVENTH SEMESTER		
Economic Botany	6	Optional
Entrepreneurship in the Agri-Food Sector	6	Optional
Experimental Projects in Biosystems and Agri-Food Engineering	6	Optional
Food and Beverage Industries	6	Optional
Food Quality and Safety Management	6	Compulsory
Life-Cycle Assessment of Products and Processes	6	Optional
Sensory Analysis	6	Optional
Viticulture	6	Optional
Work Placement	12	Optional
EIGHTH SEMESTER		
Advanced Statistics	6	Optional
Engineering Workshop	6	Compulsory
Food Industry Case Studies	6	Optional
New Product Design and Formulation	6	Optional
Bachelor's Thesis	18	Project