UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH

Bachelor's degree in Agronomic Science Engineering

On the **bachelor's degree in Agronomic Science Engineering** (which merges the content that had until now been taught on the bachelor's degrees in Agricultural Engineering and Agricultural, Environmental and Landscape Engineering), you will acquire the scientific and technological knowledge to design, plan, supervise and manage processes related to agricultural and livestock production; food quality control and safety mechanisms; the economic viability of farming companies; actions for environmental and landscape preservation and improvement; spatial planning; and fruit and vegetable production.

You can choose between two majors:

Horticulture and Gardening. You will receive multidisciplinary training in areas such as environmental management systems; water use; landscape design; implementation of green spaces; ecosystems and biodiversity; fruit and vegetable production; and plant propagation and nursery techniques. You will also learn the fundamentals of engineering technology, which will enable you to design green spaces and carry out environmental conservation and improvement, landscaping and fruit and vegetable production projects.

Agricultural Production. You will receive training in animal health, nutrition and welfare; livestock production systems; extensive farming and fruit and vegetable production; irrigation technology; agricultural machinery and buildings; crop protection; waste management; agroecology; and organic food production.

Majors

- Horticulture and Gardening
- Agricultural Production

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.

DOUBLE-DEGREE AGREEMENTS

With the Universitt Rovira i Virgili (URV)

- Bachelor's degree in Oenology

PROFESSIONAL OPPORTUNITIES

Professional opportunities

- Technical management of agricultural and livestock farms and plant nurseries.
- Freelance work: projects, consulting, advice, appraisals, site management, environmental studies, surveying applications, occupational health and safety studies, etc.
- Public administrations (European Union, Spain, autonomous communities, city councils): rural development; spatial planning and management of rural areas; planning and management of green spaces and sports areas; management and use of municipal waste; and restoration and recovery of natural spaces.
- Agricultural service companies: agricultural and livestock facilities, rural infrastructure, agricultural machinery, seeds, pesticides, fertilisers, irrigation systems, computer technologies for agriculture, quality control, etc.
- Management and handling of water resources for agricultural use and agroenergy resources and use of agricultural waste.
- Management of agricultural companies and cooperatives and marketing and sales.
- Environmental and landscaping service companies: environmental impact and restoration studies and design of gardens and green spaces.
- Research and development in companies and public bodies: agricultural biotechnology, rural development, agricultural economics, food engineering, rural engineering, environmental management, and animal and crop production.

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

Subjects	ECTS credits	Type
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		
Basic Plant Production	6	Compulsory
Cropping Systems	6	Compulsory
Energy Systems and Components	6	Compulsory
Hydraulics	6	Compulsory
Statistics	6	Compulsory
FOURTH SEMESTER		
Agricultural Mechanisation	6	Compulsory
Animal Production	6	Compulsory
Geomatics	6	Compulsory
Market Analysis and Agricultural Valuation	6	Compulsory
Plant Genetics and Breeding	6	Compulsory
FIFTH SEMESTER		
Animal Feeding and Nutrition	6	Compulsory
Animal Feeding and Nutrition	6	Compulsory
Business Economics and Management	6	Compulsory
Crop Protection	6	Compulsory
Horticultural Technology	6	Compulsory
Implementation and Management of Green Spaces	6	Compulsory
Implementation and Management of Green Spaces	6	Compulsory
Landscape History and Composition	6	Compulsory
Landscape History and Composition	6	Compulsory
Ruminant Production	6	Compulsory
Ruminant Production	6	Compulsory
SIXTH SEMESTER		
Environmental Studies of Projects	6	Compulsory
Grain and Biomass Crops	6	Compulsory
Grain and Biomass Crops	6	Compulsory
Horticultural Production	6	Compulsory
Irrigation and Drainage Technology	6	Compulsory

Subjects	ECTS credits	Type
Landscape Design	6	Compulsory
Landscape Design	6	Compulsory
Monogastric Animal Production	6	Compulsory
Monogastric Animal Production	6	Compulsory
Multiplication and Nurseries	6	Compulsory
Multiplication and Nurseries	6	Compulsory
SEVENTH SEMESTER		
Advanced Statistics	6	Optional
Agroecology	6	Compulsory
Agroecology	6	Compulsory
Construction and Structural Design	6	Compulsory
Economic Botany	6	Optional
Entrepreneurship in the Agri-Food Sector	6	Optional
Life-Cycle Assessment of Products and Processes	6	Optional
Organic Agriculture	6	Optional
Postharvest and Logistics	6	Compulsory
Postharvest and Logistics	6	Compulsory
Viticulture	6	Optional
Work Placement	12	Optional
EIGHTH SEMESTER		
Project Workshop	6	Compulsory
Waste and Water Treatment and Use	6	Compulsory
Bachelor's Thesis	18	Project