UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH

Bachelor's degree in Architectural Technology and Building Construction

Architectural technology and building construction professionals contribute to building the cities of the future and improving people's quality of life. It is a versatile profession that will provide you with a general view of the construction cycle and allow you to choose a specialisation ranging from energy efficiency and 3D design to business administration and works management. You will also become an expert in materials, structures and facilities.
To achieve this, we will provide you with a Europe-focused, generalist education on the theory, techniques and technology of the building construction sector. We emphasise going beyond lectures, fostering practical and transversal education and incorporating new teaching methods and activities that increase students' active participation in the learning process.

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 Building Construction (EPSEB)

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

ADMISSION

Places
160

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

- Organisation and supervision of building, rehabilitation and restoration work.
- Quality control of building materials and implementation of the technical standards of construction.

- Interior design.
- Technical environmental impact services and auditing services for energy efficiency certification.
- Studies on the sustainability of buildings and management of building use, conservation and maintenance.
- Management of construction and real estate companies.
- Project management.
- Structural design.
- Advanced facilities.
- Production management in companies offering products and technical innovations for building construction.
- Technical consulting and real estate and urban management.
- Financial organisation and management, including assessments, appraisals and economic feasibility studies.
- Coordination of occupational health and safety, including drafting safety studies and plans, training staff, etc.
- Development of 3D architectural projects (specialisation in software based on the BIM method).
- Technical CAD (Computer-aided design).
- Public administration.
- 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

Barcelona School of Building Construction (EPSEB)

CURRICULUM

Subjects	ECTS credits	Type
FIRST SEMESTER		
Fundamentals of Materials, Chemistry and Geology	3	Compulsory
Fundamentals of Mathematics	6	Compulsory
Introduction to Architectural Drawing	6	Compulsory
Introduction to Construction	4.5	Compulsory
Mechanics	6	Compulsory
Workshop 1: Learning From Traditional Construction	4.5	Compulsory
SECOND SEMESTER		
Architectural Drawing	6	Compulsory
Architecture, Construction and the City in Western History	4.5	Compulsory
Introduction to Structures	6	Compulsory
Physics of Installations and Energy Efficiency	4.5	Compulsory
Stone Materials	6	Compulsory
Workshop 2: Concept Modelling (BIM)	3	Compulsory
THIRD SEMESTER		
Applied Statistics	6	Compulsory

Subjects	ECTS credits	Type
Business Management	4.5	Compulsory
Construction of Structures	4.5	Compulsory
Non-Stone Materials	6	Compulsory
Steel and Concrete Structures	4.5	Compulsory
Workshop 3: Management I	4.5	Compulsory
FOURTH SEMESTER		
Building Construction Law	6	Compulsory
Building Construction Surveys and Layouts	4.5	Compulsory
Fluid Installations	6	Compulsory
Occupational Risk Prevention	4.5	Compulsory
Underground Construction	4.5	Compulsory
Workshop 4: Building Analysis	4.5	Compulsory
FIFTH SEMESTER		
Building Pathology	3	Compulsory
Construction of Envelopes and Finishes	4.5	Compulsory
Electromechanical Installations	6	Compulsory
Structural Systems	6	Compulsory
Urban Management	4.5	Compulsory
Workshop 5: Diagnosis	6	Compulsory
SIXTH SEMESTER		
Advanced Techniques in Graphic Expression	3	Compulsory
Budgets and Cost Control	7.5	Compulsory
Quality in the Building Process	4.5	Compulsory
Site Organisation and Planning	7.5	Compulsory
Workshop 6: Management II	7.5	Compulsory
SEVENTH SEMESTER		
Conservation and Maintenance	4.5	Compulsory
Coordination of Health and Safety at Work	4.5	Compulsory
Loss Adjustment and Valuation	4.5	Compulsory
Workshop 7: Rehabilitation	7.5	Compulsory
Workshop 8: Projects	9	Compulsory
EIGHTH SEMESTER		
21st Century Buildings: a Case Study for Finite Elements and Durability	3	Optional
Advanced Energy Modelling in Existing Buildings	3	Optional
Advanced Facilities Management	3	Optional
Architectural Acoustics	3	Optional
Architectural Lighting	3	Optional
Architecture and Construction of the House. History and Heritage Values for Rehabilitation	3	Optional

Subjects	ECTS credits	Type
Artificial Intelligence in Construction	3	Optional
Business Innovation	3	Optional
Business Law	3	Optional
Change of Use of Buildings	3	Optional
Circular Architecture	3	Optional
Commercial Strategy in the Construction and Real Estate Sector	3	Optional
Construction Life Cycle Analysis	3	Optional
Drawing Links and Surfaces	3	Optional
Fire Safety in Buildings	3	Optional
Fundamentals of Lean Construction and Circular Economy	3	Optional
Gaudí and Art Nouveau (Gaudí, Modernisme, Noucentisme)	3	Optional
Geomatic Techniques for Building Construction	3	Optional
Gis and Territory	3	Optional
Interior Design Project	3	Optional
Introduction to Lean Construction	3	Optional
Management Skills	3	Optional
Quantity Surveying	3	Optional
Real Estate Project Finance	3	Optional
Sensorisation and Digitalisation of Use	3	Optional
Strategies and Business Leadership in the Construction Sector	3	Optional
Thermography for Building Diagnostics	3	Optional
Traditional Materials and Techniques	3	Optional
Urbanisation Projects	3	Optional
Virtual Representation of BIM Models and Heritage Surveys	3	Optional
Workshop 9: Final Model	6	Compulsory
Bachelor's Thesis	12	Project