

Bachelor's degree in Architectural Technology and Building Construction

This **bachelor's degree in Architectural Technology and Building Construction**, will provide you with a Europe-focused, generalist education on the theory, techniques and technology of the building construction sector. You will acquire the competencies needed to solve any issue related to stages in the building cycle: construction, maintenance, rehabilitation, demolition and urban development. Once you graduate, you will be qualified to practise some of the professions with the most reach in the European building sector: technical architect, construction site manager, health and safety coordinator and building information modelling (BIM) 3D software specialist. You will specialise by taking an optional subject pathway that provides the specific knowledge that is required for the Diploma of Further Competencies (DAC), a diploma that can be homologated by the Professional Certification Agency (ACP), which certifies the quality, capacity and competence of professionals in the building construction and architecture sector.

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

[Barcelona School of Building Construction \(EPSEB\)](#)

Official degree

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

ADMISSION

Places

140

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
Introduction to Architectural Drawing	6	Compulsory
Introduction to Construction	4.5	Compulsory
Mathematical Fundamentals	6	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
Installations Physics and Energy Efficiency	4.5	Compulsory
Introduction to Structures	6	Compulsory
Stone Materials	6	Compulsory
Workshop 2: Concept Modeling (Bim)	3	Compulsory
THIRD SEMESTER		
Applied Statistics	6	Compulsory
Business Management	4.5	Compulsory
Non-Stone Materials	6	Compulsory

Subjects	ECTS credits	Type
Steel and Concrete Structures	4.5	Compulsory
Structures Construction	4.5	Compulsory
Workshop 3: Management I	4.5	Compulsory
FOURTH SEMESTER		
Construction Surveys and Layouts	4.5	Compulsory
Fluid Installations	6	Compulsory
Legislation Applied to Building	6	Compulsory
Occupational Risks Prevention	4.5	Compulsory
Underground Construction	4.5	Compulsory
Workshop 4: Building Analysis	4.5	Compulsory
FIFTH SEMESTER		
Building Pathology	3	Compulsory
Electromechanic Installations	6	Compulsory
Envelopes and Finishes Construction	4.5	Compulsory
Structural Systems	6	Compulsory
Urban Management	4.5	Compulsory
Workshop 5: Diagnosis	6	Compulsory
SIXTH SEMESTER		
Advanced Technics in Graphical Expression	3	Compulsory
Budgets and Cost Control	7.5	Compulsory
Quality in the Building Process	4.5	Compulsory
Site Organization and Planning	7.5	Compulsory
Workshop 6: Management II	7.5	Compulsory
SEVENTH SEMESTER		
Conservation and Maintenance	4.5	Compulsory
Health and Safety at Work Coordination	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 Modeling in Existing Buildings	3	Optional
Advanced Facilities Management	3	Optional
Architectural Lighting	3	Optional
Architecture and Construction of the House. History and Heritage Values for Rehabilitation	3	Optional
Artificial Intelligence in Construction	3	Optional
Building Acoustics	3	Optional
Business Innovation	3	Optional

Subjects	ECTS credits	Type
Change of Use of Building	3	Optional
Circular Architecture	3	Optional
Commercial Strategy in the Construction and Real Estate Sector	3	Optional
Construction Life Cycle Analysis	3	Optional
Fire Safety in Buildings	3	Optional
Gaudí & Art Nouveau (Gaudí, Modernism, Noucentisme)	3	Optional
Geomatic Techniques for Building	3	Optional
Gis and Territory	3	Optional
Interior Design Project	3	Optional
Lean Integrated Project Delivery	3	Optional
Management Skills	3	Optional
Real Estate Project Finance	3	Optional
Sensorization and Digitization of Use	3	Optional
Sketching Bonds and Surfaces	3	Optional
Strategies and Business Leadership in the Construction Sector	3	Optional
Traditional Materials and Techniques	3	Optional
Urbanization Projects	3	Optional
Virtual Representation of Bim Models and Heritage Surveys	3	Optional
Workshop 9: Final Model	6	Compulsory
Bachelor's Thesis	12	Project