

BACHELOR'S DEGREE IN CIVIL ENGINEERING

ESCOLA DE CAMINS
Barcelona School of Civil Engineering



UNIVERSITAT POLITÈCNICA
DE CATALUNYA
BARCELONATECH

BACHELOR'S DEGREE IN CIVIL ENGINEERING

12
international
double degrees

Participation in international networks and programmes: ERASMUS+, KA103, UNITECH, Smile-Magalhães, CINDA, CLUSTER, TIME and others

Civil engineering is a comprehensive and versatile area of knowledge that has a role to play in overcoming the world's current challenges, many of them emerging and strategic, such as safe and sustainable mobility, the universal human right to water, renewable energies and the energy transition, smart cities, the resilience of infrastructure and services to natural disasters, just-in-time logistics, the circular economy and climate change mitigation.

Civil engineering is entrusted with planning, conceiving, designing, building, maintaining, integrating and managing transport infrastructure for smart mobility; roads and channels that move water, energy, goods and people; ports, airports, stations and logistics centres; natural resource and waste recycling management systems; and public spaces in cities.

The bachelor's degree prepares you to analyse, manage and solve problems related to the land and the environment and to find efficient solutions that contribute to meeting the Sustainable Development Goals and ensuring society's environmental, social and economic well-being.

Curriculum

This information may be subject to change.
Up-to-date information is available at upc.edu

**240 ECTS
credits**

Which courses will you take?

1st year

1st semester

Applied Geology	6
Applied Physics	6
Fundamentals of Mathematics	6
Graphic Expression	6
Linear Algebra	6

2nd semester

Calculus	6
Construction Businesses and Law	6
Materials Chemistry	6
Mechanics I	6
Urbanism and Regional Systems	6

2nd year

1st semester

Geomatics	6
Construction Materials	6
Geometry and Differential Equations	6
Mechanics II	6
Statistics	6

2nd semester

Environmental Technology	6
Hydraulic Conduction	6
Numerical Methods and Informatics	6
Representation Techniques	6
Strength of Materials	6

 Compulsory

+300
students on work
placement

90%
graduate employment rate

Source: Sixth graduate employment survey of Catalan universities by the Catalan University Quality Assurance Agency (AQU Catalunya, 2020)

Why this bachelor's degree?

It will provide you with a solid grounding in science and in engineering tools that will enable you to tackle complex technological and engineering problems. In the last year you will focus on one of the specialisation pathways: Hydrology, Civil Constructions or Urban Transport and Services.

Your bachelor's degree!

If you are someone with good logical reasoning skills and a solid grounding in mathematics and physics, who wants to put knowledge at the service of society, to protect and improve its services and infrastructure, and use natural resources sustainably, this is your degree!

Professional opportunities

You will join companies dealing with infrastructure that moves water, energy, goods and people; companies and institutions managing natural resources and recycling and working to combat the effects of climate change; and quality assurance and geohazard assessment laboratories.

The School of Civil Engineering promotes contact between students and the business world through meetings with companies, forums and UPC Alumni.

Bachelor's degree in Civil Engineering / In English

The bachelor's degree taught entirely in English allows our students to acquire the capabilities to develop professionally in a globalised environment. Students who complete the bachelor's degree in English and do an international stay during the degree are awarded an international studies certificate.

Complementary activities

On the bachelor's degree you will combine lectures, seminars and conferences with laboratory practicals and site visits, and you will be able to participate in initiatives and projects that promote the analysis of new challenges in the field of civil engineering and the proposal of solutions to these challenges.

Placements and collaborations with companies

Students can acquire experience and professional skills geared towards employment on work placement at national and international companies and institutions. To foster teamwork, the bachelor's degree in Civil Engineering collaborates with companies that allow students to participate in real

interdisciplinary projects that increase their employability.

Go international!

Opt for a international stay: more than 350 places are available on international mobility programmes in 36 countries, where you can take some courses and/or do your final thesis.

Double degrees

The School of Civil Engineering offers several international double degrees with top institutions in both engineering and management.

International recognition

The School's teaching staff receive national and international prizes and awards for their teaching and research, a fact that contributes to the School being well positioned in the main international rankings.

The 2023 QS World University Rankings by Subject rank the UPC as the top university in Spain in Civil Engineering, the 9th in Europe and the 35th worldwide.

3rd year

1st semester

Geotechnics	6
Organisation, Measurement and Valuation of Public Works	6
Structures	6
Surface and Groundwater Hidrology	6
Transport Systems	6

2nd semester

Concrete	6
Construction Procedures and Electrotècnia	6
Design and Construction of Public Works	6
Metal Construction	6
Transport Infrastructure	6

4th year

1st semester

Construction of Maritime Works	6
Geotechnical Engineering	6
Optional subjects	18

2nd semester

Optional subjects	18
Bachelor's Thesis	12

BACHELOR'S DEGREE IN CIVIL ENGINEERING

This degree officially qualifies graduates for practice as:

- Technical public works engineer.
- Civil engineer, when you complete the sequential academic programme in Civil Engineering.

The bachelor's degree in Civil Engineering brings together science and technology to serve society.

It provides you access
to the master's degree
in Civil Engineering.



Engineering that moves the world

Further information:
camins.upc.edu

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