UPC studies

MASTER'S DEGREE IN CIVIL ENGINEERING

ETSECCPB
Barcelona School of Civil Engineering

UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH

MASTER'S DEGREE IN CIVIL ENGINEERING

New social, environmental and economic models and scenarios pose significant challenges that make it necessary to develop and adapt current structures and systems for mobility management, transport and logistics systems, large infrastructure management, water supply, energy sources, waste reduction and environmental protection.

The world is changing, and it needs professionals who are able to provide innovative and creative solutions from a global perspective using the knowledge of the twenty-first century. Civil engineering is an essential part of this development towards the societies of the future. It contributes to the improvement of people's quality of life, environmental protection and economic growth.

Which courses will you take?

120 ECTS

The curriculum reinforces prior learning in mathematics, physics, science and technology on the bachelor's degree by teaching students the most advanced and experimental techniques for modelling in engineering.

First year

Continuum Mechanics	9
Numerical Modelling	9
Structural Analysis	7,5
Hydraulic Infrastructure	4,5
Structural Engineering	6
Computational Engineering	6
Geomechanics and Geotechnical Engineering	6
Water Engineering	6
Regional Transport Planning and Management	6

Second year

Specialisations to choose from

Structural Engineering and Construction	35
Geotechnical Engineering	35
Water Engineering	35
Computational Engineering	35
Transport Engineering and Urbanism	35
Environmental Engineering and Sustainability	35
Master's Thesis	25

Further training in science and technology

Application of advanced science and technology

Specialisation

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

7
doctoral programmes with a Pathway to Excellence award

5
research centres

19
laboratories with innovative technologies

Why this master's degree?

The master's degree in Civil Engineering provides advanced multidisciplinary and technological training. It will introduce you to research, design and analysis and qualify you to practise as a civil engineer.
It provides future professionals with a solid technical basis for designing and overseeing the development of infrastructure and planning and managing environmental services and resources for spatial planning.

Professional opportunities

The master's degree promotes the acquisition and development of the skills needed for employment in national and international engineering firms, construction companies, consultancy firms, government organisations and research institutes. Graduates may be employed as team managers in maritime and coastal fields, water resources and water supply, structural design, spatial planning, logistics, transport and the environment, and computational mechanics. Civil engineers are also increasingly employed in various areas of business, thanks to their analytical skills and ability to solve complex problems, which are highly valued in industrial and service sectors.

Foreign language

We promote foreign language learning by increasing, year on year, the number of courses taught in English.

Internationalisation

We offer over 200 international mobility places to take courses or the master's thesis abroad.

Double degrees

International double degrees are taught in conjunction with top-level institutions from which you graduate with a master's degree in Civil Engineering from the Barcelona School of Civil Engineering and a master's degree from the partner institution, whether in engineering or management.

Work placement

You will have the option of taking a work placement at national and international companies and institutions to acquire professional experience.

International networks

The Barcelona School of Civil Engineering participates in renowned international networks such as CLUSTER, UNITECH, EUCEET, TIME, CINDA and SMILE-Magalhães.

Master's thesis

You will have the option of carrying out your master's thesis at departments, laboratories and research groups within the School, at a company or within the framework of a mobility programme.

Specific requirements

This master's degree, as part of an integrated academic programme, is aimed at graduates of the bachelor's degree in Civil Engineering. If you have another university qualification check the website camins.upc.edu.

International recognition

The School of Civil Engineering ranks prominently in the main international rankings.
The 2022 QS World University Rankings by Subject rank the UPC as the top university in Spain in Civil and Structural Engineering, the 8th in Europe and the 29th worldwide.
Every year, the School's teaching staff receive national and international prizes and awards for their teaching and research.

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CIVIL ENGINEERING

The master's degree officially qualifies graduates for practice as civil engineers.

You will carry out your master's thesis on an innovative, creative topic in one of the areas of specialisation.

The **Barcelona School of Civil Engineering (ETSECCPB)** is a university school that is an international benchmark in civil, geological and environmental engineering because of the quality of its teaching and high-level research. It is the only school in Catalonia that teaches civil engineering.

The **ETSECCPB** belongs to the Universitat Politècnica de Catalunya-BarcelonaTech (UPC), a renowned public institution of research and higher education in the fields of engineering, architecture, sciences and technology. With 50 years of history and more than 30,000 students, the UPC has the greatest concentration of research and technological innovation in southern Europe. It is the best university in Spain in Civil and Structural Engineering, according to the 2022 QS World University Rankings by Subject.

Your talent, our commitment to the future

Further information:
camins.upc.edu

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