

# MASTER'S DEGREE IN CIVIL ENGINEERING (PROFESSIONAL TRACK)

**ESCOLA DE CAMINS**

Barcelona School of Civil Engineering



UNIVERSITAT POLITÈCNICA  
DE CATALUNYA  
BARCELONATECH

*International Campus of Excellence*

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# MASTER'S DEGREE IN CIVIL ENGINEERING (PROFESSIONAL TRACK)

Access to the industrial doctorate in Civil and Geo-Environmental Engineering

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.

The curriculum reinforces the grounding in physics, mathematics and general science and technology provided by the bachelor's degree by using the most advanced and experimental techniques for modelling in the field of engineering. 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 in order to contribute to spatial planning.

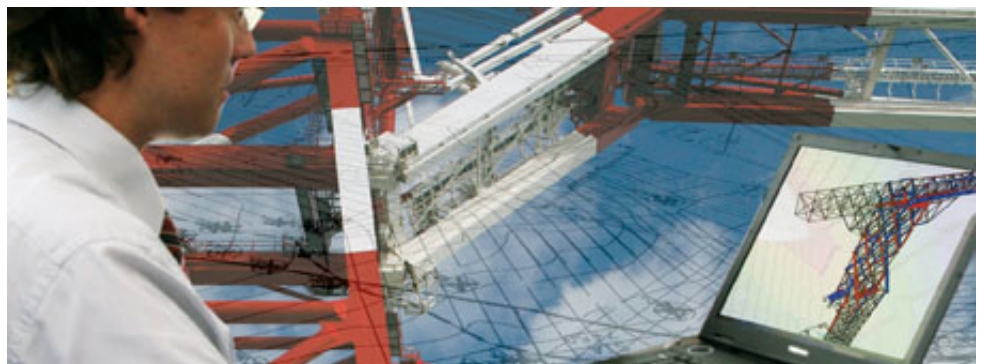
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**120  
ECTS**

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## Which subjects will you choose?

The programme comprises a total of 120 credits, divided into four semesters (two academic years).



**1**  
Erasmus Mundus  
doctoral degree

**5**  
doctoral degrees  
with a Pathway to  
Excellence award

**5**  
research  
centres

**19**  
laboratories with  
innovative technologies

## Career 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. Employment may also be sought in the supervision of maritime and coastal work teams, water resources and supply, structural design, spatial planning, logistics, transport and the environment, and computational mechanics, although 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 industry and in the service sector.

## Languages

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

## Internacionalisation

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

## Double degrees

International double degrees 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 go on work placement at national and international companies and institutions to gain work experience.

## International networks

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

## Master's thesis

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

## Requirements

This master's degree is aimed at graduates of degrees in civil and public works engineering within the framework of an integrated academic programme. Graduates of other university degrees may need to take bridging courses. For further information on these requirements, visit the master's degree website:

[www.camins.upc.edu/estudis](http://www.camins.upc.edu/estudis)

## International recognition

Every year, the School's teaching staff receive national and international prizes and awards for their teaching and research.

Both the QS World University Rankings and the National Taiwan University Ranking (NTU Ranking) rank the University as the top Spanish university in the field of civil engineering, and 39th and 50th in the world, respectively.

## First year

Continuous Media 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

You will choose an area of specialisation (35 credits).

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

Further training in science and technology

Application of advanced science and technology

Specialisation

Master's thesis

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**The master's  
degree qualifies  
you to practise**  
the regulated  
profession of civil  
engineer.

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



**Your talent, leading your future**

Further information:  
[www.camins.upc.edu/estudis](http://www.camins.upc.edu/estudis)



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