MASTER’S DEGREE IN GEOLOGICAL AND MINING ENGINEERING

ESCOLA DE CAMINS
Barcelona School of Civil Engineering

UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH
International Campus of Excellence
MASTERS DEGREE IN GEOLOGICAL AND MINING ENGINEERING

The interuniversity master’s Degree in Geological and Mining Engineering, taught at the Barcelona School of Civil Engineering (UPC) and the Faculty of Geology (UB), provides interdisciplinary and technological training that will qualify you to practise as a mining engineer.

A combination of geotechnical and engineering knowledge, particularly of land behaviour, the management of natural resources, geological hazards and the minimisation of environmental impact provides graduates of this master’s degree with very good career prospects.

Your academic curriculum will be based on the development and use of innovative experimental and modelling techniques for mining and geological engineering.

120 ECTS

Which courses will you take?

The programme consists of 120 ECTS credits divided into four semesters.
**Professional opportunities**

The master’s degree promotes the acquisition and development of the skills needed to work at engineering and environmental firms, consultancies, government agencies and research departments in public or private institutions.

You may seek employment in a range of fields, such as land security in large-scale construction work and the protection and management of the environment and energy and natural resources, particularly hydrology.

**Languages**

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

**Internacionalisation**

We offer over 100 international mobility places to take courses or the master’s thesis abroad.

**Double degree**

International double degree taught in conjunction with top-level institution from which you graduate with a master’s degree in Geological Engineering from the Barcelona School of Civil Engineering and a master’s degree from the partner institution.

**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, UNITECH, EUCET, TIME, CINDA and Smile-Magalhães.

**International recognition**

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

In both the QS World University Rankings and the National Taiwan University (NTU) Ranking, the UPC is the top Spanish university in the field of Civil Engineering and 36th and 47th in the world, respectively.

**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, which is part of an integrated academic programme, is aimed at graduates of the bachelor’s degree in Geological Engineering. Graduates of other university degrees may need to take bridging courses.

For further information on the academic requirements, visit the master’s degree website:

www.camins.upc.edu/estudis

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**First course**

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

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<th>Credits</th>
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<tbody>
<tr>
<td>Continuum Mechanics</td>
<td>7.5</td>
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<tr>
<td>Numerical Modelling</td>
<td>7.5</td>
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<tr>
<td>Planning and Management of Geological Resources</td>
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<tr>
<td>Project and Management of Infrastructure and Facilities</td>
<td>7.5</td>
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<tr>
<td>Geomechanical and Geotechnical Engineering</td>
<td>6</td>
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<td>Water and Geoenvironmental Engineering</td>
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<td>Computational Engineering</td>
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<td>Mineral Resources</td>
<td>6</td>
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<td>Energy Resources</td>
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**Second course**

| Specialisation in Geotechnical Engineering | 35 |
| Specialisation in Environmental Engineering | 35 |
| Specialisation in Mineral and Energy Resources | 35 |
| Master Thesis                             | 25 |
MASTER’S DEGREE IN GEOLOGICAL AND MINING ENGINEERING

This master’s degree qualifies you to practise the regulated profession of mining engineer.

You can carry out the master’s thesis on an innovative and creative subject in one of the areas of specialisation.

Your talent, leading your future

Further information:
www.camins.upc.edu/estudis