Bachelor's degree in Mining Engineering

The bachelor’s degree in Mining Engineering will provide you with the knowledge and skills required to manage the stages of exploration, prospecting, exploitation and restoration of any project aimed at obtaining mineral resources. You will learn to use the latest technological and computer developments in designing and planning in the mining sector. Training in applied geology, land management and civil works will provide you with a wide range of employment opportunities. You will become a versatile engineer who is able to adapt to any kind of task related to the land and the mineral resources it contains.

### 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: €2,551 (€3,826 for non-EU residents). Consult the public fees system based on income (grants and payment options).

**Official degree**  
Recorded in the Ministry of Education's degree register

### ADMISSION

**Places**  
40

**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**  
- Project management and development for surface and underground mining.
- Excavation, tunnelling and earthworks.
- Use and handling of explosives.
- Construction materials.
- Land management and surveying.
- Restoration of degraded natural areas and waste management.
- Drilling and water reuse.
- Research, development and innovation projects.
- Public administration and teaching.
ORGANISATION

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

Manresa School of Engineering (EPSEM)

CURRICULUM

Subjects | ECTS credits | Type
--- | --- | ---
**FIRST SEMESTER**
Applied Chemistry | 6 | Compulsory
Geology and Geological Cartography | 6 | Compulsory
Mathematics | 6 | Compulsory
Mineralogy and Petrology | 6 | Compulsory
Physics I | 6 | Compulsory

**SECOND SEMESTER**
Applied Statistics | 4.5 | Compulsory
General Surveying and Cartography | 6 | Compulsory
Graphic Expression | 6 | Compulsory
Mineral Processing | 9 | Compulsory
Physics II | 4.5 | Compulsory

**THIRD SEMESTER**
Advanced Mathematics | 6 | Compulsory
Earth Engineering | 6 | Compulsory
Informatics Applied to Engineering | 4.5 | Compulsory
Mineral Deposits | 4.5 | Compulsory
Thermodynamics and Fluid Mechanics | 9 | Compulsory

**FOURTH SEMESTER**
Applied Surveying and Cartography | 6 | Compulsory
Business Management | 6 | Compulsory
Design and Excavation of Tunnels | 6 | Compulsory
Hidrogeology | 6 | Compulsory
Materials Engineering | 6 | Compulsory

**FIFTH SEMESTER**
Electricity and Control Engineering | 6 | Compulsory
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<thead>
<tr>
<th>Subjects</th>
<th>ECTS credits</th>
<th>Type</th>
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<tbody>
<tr>
<td>Engineering Mechanics and Structures</td>
<td>6</td>
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<tr>
<td>Ground Modelling</td>
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<td>Surface Excavation Design</td>
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<tr>
<td>Technology of Mining Exploration</td>
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<td><strong>SIXTH SEMESTER</strong></td>
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<td>Environmental Impact and Restoration</td>
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<td>Land Management and Urban Planning</td>
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<td>Mine Ventilation and Working Conditions</td>
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<td>Occupational Risks Prevention</td>
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<tr>
<td>Underground Mining</td>
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<td><strong>SEVENTH SEMESTER</strong></td>
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<td>Aggregates, Cement and Concrete</td>
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<td>Business English</td>
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<tr>
<td>Downholes and Horizontal/Directional Drilling</td>
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<tr>
<td>Energy Resources</td>
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<tr>
<td>Glass and Ceramic Industry</td>
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<tr>
<td>Maintenance Management</td>
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<tr>
<td>Mining Project Management</td>
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<td>Compulsory</td>
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<tr>
<td>New Mining Techniques</td>
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<tr>
<td>Ornamental Rocks</td>
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<td>Potash Mining</td>
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<tr>
<td>Quality Management and Integrated Quality, Safety and Environmental Management Systems</td>
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<tr>
<td>Thermal and Mineral Waters</td>
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<td>Use of Explosives</td>
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<td><strong>EIGHTH SEMESTER</strong></td>
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