

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.

This bachelor's degree is taught at [Manresa School of Engineering. EPSEM](#)

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		

Subjects	ECTS credits	Type
Electricity and Control Engineering	6	Compulsory
Engineering Mechanics and Structures	6	Compulsory
Ground Modelling	6	Compulsory
Surface Excavation Design	7.5	Compulsory
Technology of Mining Exploration	4.5	Compulsory
SIXTH SEMESTER		
Environmental Impact and Restoration	7.5	Compulsory
Land Management and Urban Planning	4.5	Compulsory
Mine Ventilation and Working Conditions	4.5	Compulsory
Occupational Risks Prevention	6	Compulsory
Underground Mining	7.5	Compulsory
SEVENTH SEMESTER		
Aggregates, Cement and Concrete	6	Optional
Business English	6	Optional
Downholes and Horizontal/Directional Drilling	6	Optional
Energy Resources	6	Optional
Glass and Ceramic Industry	6	Optional
Maintenance Management	6	Optional
Mining Project Management	6	Compulsory
New Mining Techniques	6	Optional
Ornamental Rocks	6	Optional
Potash Mining	6	Optional
Quality Management and Integrated Quality, Safety and Environmental Management Systems	6	Optional
Thermal and Mineral Waters	6	Optional
Use of Explosives	6	Compulsory
EIGHTH SEMESTER		
Bachelor's Thesis	18	Project