

## School of Civil Engineering of Barcelona UPC BARCELONATECH

6

Curriculum

Bachelor's Degree in Civil Engineering Technologies (2020-2021)

FIRST YEAR		SECOND YEAR		THIRD YEAR			FOURTH YEAR		
Fall semester		Fall semester		Fall semester			Fall semester		
Physics	6	Differential geometry & differential equations	6	Soil mechanics	6		Optional subjects	6	
Mathematics	6	Urbanism	6	Numerical modelling	6	1 1	Optional subjects	6	
Materials chemistry	6	Strength of materials & structures	6	Structural analysis	6	1 1	Optional subjects	6	
Economics, business & law	6	Probability & statistics	6	Structural technology I	6	1	Optional subjects	6	
Metric geometry & representation systems	6	Mobility & transport networks	6	Surface & groundwater hydrology	6		Optional subjects	6	
Spring semester		Spring semester		Spring semester			Spring semester		
Algebra & geometry	6	Mathematical models of physics	6	Communication techniques	6		Optional subjects	6	
Geology	6	Hydraulics & hydrology	6	Structural technology II	6	1	Optional subjects	6	
Rational mechanics	6	Geomatics & geographic information	6	Maritime & port engineering	6	1	Projects & business organisation	6	
Calculus	6	Environmental engineering	6	Geotechnical & geological engineering	6		Bachelor's Final Thesis	12	
Construction materials	6	Boads & railways	6	Construction procedures &	6	ן י			

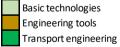
## **OPTIONAL SUBJECTS**

Construction materials

Fall semester	Spring semester					
Risk assessment for natural hazards	Software tools for civil engineering					
Instrumentation and remote sensing	Urban mobility and decision support					
Machine learning and data science	Digital twins and augmented reality					
Programming for science and engineering	Entrepeneurship and innovation					
Sustainability, social and environmental impact						

6

Basic sciences Engineering applied sciences



Roads & railways

Structural analysis and technologies Water cycle engineering Geotechnical engineering

electrotechnics

Optional subjects related to civil engineering

6

Project and construction of public works and infrastructures