



Bachelor's Degree in Civil Engineering (2020)		Bachelor's Degree in Civil Engineering (2010)		
Course	ECTS	Code	Course	ECTS
<b>Basic sciences</b>				
Mathematics fundamentals	6	250105	Mathematics fundamentals	6
Linear algebra	6	250101	Algebra & geometry	6
Chemistry of materials	6	250109	Materials chemistry	7,5
Applied geology	6	250106	Geology	6
Applied physics	6	250104	Physics	6
Business & construction legislation	6	250103	Economy, business & legislation	6
<b>Sciences Applied to Engineering</b>				
Mechanics I	6	250108	Rational mechanics	7,5
Mechanics II	6	250121	Continuum mechanics	9
Calculus	6	250102	Calculus	9
Vector calculus & differential equations	6	250122	Differential geometry & differential equations	9
Construction materials	6	250124	Construction materials	6
Urbanism & regional systems	6	250136	Urbanism	6
<b>Introduction to Technology</b>				
Hydraulics	6	250130	Hydraulics & hydrology	9
Strength of materials	6	250120	Strength of materials & structures	9
Numerical methods in engineering	6	250133	Numerical modelling	9
Geotechnics	6	250131	Soil mechanics	9
<b>Engineering Tools</b>				
Graphic expression	6	250107	Metric geometry & representation systems	6
Geomatics	6	250125	Geomatics & geographic information	6
Probability & statistics	6	250123	Probability & statistics	7,5
Representation techniques	6	250126	Descriptive geometry	6
<b>Structural &amp; Foundation Engineering</b>				
Structures	6	250132	Structural analysis	7,5
Reinforced concrete	6	250140	Concrete structures	7,5
Metallic constructions	6	250141	Steel structures	6
Geotechnical engineering	4,5	250145	Geotechnical engineering	4,5
<b>Water Technologies</b>				
Surface & groundwater hydrology I	6	250144	Surface & groundwater hydrology	4,5
Environmental technology	6	250135	Environmental engineering	6
Maritime constructions	4,5	250143	Maritime & port engineering	6
<b>Transportation Technologies</b>				
Transportation systems	6	250137	Transportation	6
Transportation infrastructures	6	250134	Roads & railways	7,5
<b>Itinerary in Technologies Applied to Civil Construction</b>				
Structural design (mandatory)	6			
Construction of bridges & other structures (mandatory)	6			
Building construction & prefabrication (mandatory)	7,5			
Prestressed concrete (elective)	4,5			
Introduction to structure management (elective)	4,5			
Construction management (elective)	4,5			
Geotechnical constructions (elective)	4,5			
<b>Itinerary in Technologies Applied to Hydrology</b>				
Hydraulic constructions (mandatory)	6	250142	Hydraulic constructions	4,5
Sanitary engineering (mandatory)	4,5			
Surface & groundwater hydrology II (mandatory)	4,5			
Port engineering (mandatory)	4,5	250143	Maritime & port engineering	6



Environmental impact on maritime works (elective)	4,5			
Water supply (elective)	4,5			
Design & analysis tools in hydraulic engineering (elective)	4,5			
<b>Itinerary in Technologies Applied to Urban Transportation &amp; Services</b>				
Construction of transportation infrastructures (mandatory)	6			
Transportation management (mandatory)	6			
Administration, urban planning & public services (mandatory)	7,5			
Elements of urban sustainability (elective)	4,5			
Infrastructure preservation (elective)	4,5			
Urban logistics & transportation terminals (elective)	4,5			
<b>Common Electives</b>				
Graphic design & numerical analysis	4,5			
Geographic information systems & teledetection	4,5			
History of civil engineering	4,5			
Social impact of public constructions	4,5			
Machine learning & data science	4,5			
Recognition of additional university activities	6		Recognition of additional university activities	6
<b>Project &amp; Construction of Works and Infrastructures</b>				
Construction procedures & electrotechnics	6	250127	Construction management & electrotechnics	7,5
Construction management	6			
Public works project	6	250147	Projects & business organisation	4,5
<b>Thesis</b>				
Bachelor's thesis	12			