



Bachelor's Degree in Civil Engineering (2020)		Bachelor's Degree in Civil Engineering (2010)		
Course	ECTS	Code	Course	ECTS
Basic sciences				
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
Sciences Applied to Engineering				
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
Introduction to Technology				
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
Engineering Tools				
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
Structural & Foundation Engineering				
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
Water Technologies				
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
Transportation Technologies				
Transportation systems	6	250137	Transportation	6
Transportation infrastructures	6	250134	Roads & railways	7,5
Itinerary in Technologies Applied to Civil Construction				
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			
Itinerary in Technologies Applied to Hydrology				
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			
Itinerary in Technologies Applied to Urban Transportation & Services				
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			
Common Electives				
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
Project & Construction of Works and Infrastructures				
Construction procedures & electrotechnics	6	250127	Construction management & electrotechnics	7,5
Construction management	6			
Public works project	6	250147	Projects & business organisation	4,5
Thesis				
Bachelor's thesis	12	250148	Bachelor's thesis	12



Bachelor's Degree in Civil Engineering (2020)		Bachelor's Degree in Public Works Engineering (2010)		
Course	ECTS	Code	Course	ECTS
Basic sciences				
Mathematics fundamentals	6	250206	Mathematic fundamentals	6
Linear algebra	6	250201	Linear algebra	6
Chemistry of materials	6	250209	Chemistry of materials	7,5
Applied geology	6	250207	Applied geology	6
Applied physics	6	250205	Applied physics	6
Business & construction legislation	6	250203	Business & construction legislation	6
Sciences Applied to Engineering				
Mechanics I	6	250208	Mechanics	9
Mechanics II	6			
Calculus	6	250202	Calculus	6
Vector calculus & differential equations	6	250221	Differential equations	4,5
Construction materials	6	250223	Construction materials	6
Urbanism & regional systems	6	250238	Urbanism & regional systems	4,5
Introduction to Technology				
Hydraulics	6	250220	Hydraulics	9
Strength of materials	6	250222	Strength of materials	6
Numerical methods in engineering	6	250224	Numerical methods & informatics	7,5
Geotechnics	6	250230	Geotechnics	9
Engineering Tools				
Graphic expression	6	250204	Graphic expression	7,5
Geomatics	6	250225	Geomatics & surveying	7,5
Probability & statistics	6	250227	Descriptive statistics	7,5
Representation techniques	6	250226	Representation techniques	6
Structural & Foundation Engineering				
Structures	6	250231	Structures	6
Reinforced concrete	6	250232	Reinforced concrete	6
Metallic constructions	6	250234	Metallic constructions	6
Geotechnical engineering	4,5	250240	Geotechnical engineering	4,5
Water Technologies				
Surface & groundwater hydrology I	6	250233	Surface & groundwater hydrology I	4,5
Environmental technology	6	250236	Environmental technology	4,5
Maritime constructions	4,5	250241	Maritime constructions	4,5
Transportation Technologies				
Transportation systems	6			
Transportation infrastructures	6	250235	Transport infrastructures	7,5
Itinerary in Technologies Applied to Civil Construction				
Structural design (mandatory)	6	250244	Structural design	6
Construction of bridges & other structures (mandatory)	6	250243	Construction of bridges & other structures	6
Building construction & prefabrication (mandatory)	7,5	250242	Building construction & prefabrication	7,5
Prestressed concrete (elective)	4,5	250245	Prestressed concrete	4,5
Introduction to structure management (elective)	4,5	250246	Introduction to structural management	4,5
Construction management (elective)	4,5	250266	Construction management	4,5
Geotechnical constructions (elective)	4,5			
Itinerary in Technologies Applied to Hydrology				
Hydraulic constructions (mandatory)	6	250254	Hydraulic constructions	6
Sanitary engineering (mandatory)	4,5	250255	Sanitary engineering	4,5
Surface & groundwater hydrology II (mandatory)	4,5	250252	Surface & groundwater hydrology II	4,5
Port engineering (mandatory)	4,5	250253	Port engineering	4,5



Environmental impact on maritime works (elective)	4,5	250264	Environmental impact on maritime works	4,5
Water supply (elective)	4,5	250257	Water supply	4,5
Design & analysis tools in hydraulic engineering (elective)	4,5	250256	Instrumentation & testing in hydraulic works	4,5
Itinerary in Technologies Applied to Urban Transportation & Services				
Construction of transportation infrastructures (mandatory)	6	250248	Construction of transport infrastructures	6
Transportation management (mandatory)	6	250249	Transportation management	6
Administration, urban planning & public services (mandatory)	7,5	250247	Administration, urban planning & public services	7,5
Elements of urban sustainability (elective)	4,5	250251	Urbanization & management of urban environment	4,5
Infrastructure preservation (elective)	4,5	250250	Maintenance of infrastructures	4,5
Urban logistics & transportation terminals (elective)	4,5	250265	Urban logistics & transport terminals	4,5
Common Electives				
Graphic design & numerical analysis	4,5	250261	Graphic design & numerical analysis	4,5
Geographic information systems & teledetection	4,5	250258	Geographical Information Systems & teledetection	4,5
History of civil engineering	4,5	250260	History of public constructions	4,5
Social impact of public constructions	4,5	250259	Social impacts of the public constructions	4,5
Machine learning & data science	4,5			
Recognition of additional university activities	6		Recognition of additional university activities	6
Project & Construction of Works and Infrastructures				
Construction procedures & electrotechnics	6	250228	Construction methods & electrical engineering	6
Construction management	6	250237	Organisation, measurement & budget for public works	7,5
Public works project	6	250239	Project & construction of public works	4,5
Thesis				
Bachelor's thesis	12	250262	Bachelor's thesis	12