

Studies Plan

Mineur : Génie civil 2025-26

Minor : Civil Engineering

Courses				Exam Session	Exam	Credit
Lang.	Code	Sect.	Teacher			
	Advanced composites in engineering structures					
E	CIVIL-443	GC	Vassilopoulos	Win	Oral	3
	Bridge design					
E	CIVIL-478	GC		Sum	During the semester	3
	Composites design and innovation					
E	CIVIL-464	GC	Vassilopoulos	Sum	Oral	3
	Computational geomechanics					
E	CIVIL-423	GC		Win	During the semester	4
	Continuum mechanics and applications					
E	CIVIL-425	GC		Sum	Oral	6
	Dam engineering					
E	CIVIL-411	GC	De Cesare Manso	Win	Oral	3
	Decision-aid methodologies in transportation					
E	CIVIL-557	GC	Bierlaire Klibi	Sum	During the semester	4
	Deep learning for autonomous vehicles					
E	CIVIL-459	GC	Alahi	Sum	During the semester	6
	Design and construction of roadways					
F	CIVIL-463	GC	Tille	Win	Written	3
	Design of precast concrete structures					
E	CIVIL-414	GC	Fernandez-Ordaz	Sum	During the semester	3
	Dynamics of structures					
E	CIVIL-468	GC	Lignos Vanin	Win	Written	4
	Energy geostructures					
E	CIVIL-444	GC		Sum	Written	4
	Engineering of existing structures					
E	CIVIL-511	GC	Denarié Nussbaumer	Win	Oral	4
	Flood and dam break waves					
F	CIVIL-515	GC	Ancey	Sum	Oral	3
	Fluvial hydraulics and river training works					
F	CIVIL-410	GC	André Arborino De Cesare	Win	Oral	3
	Fracture of materials					
E	MSE-424	MX	Drezet Molinari	Sum	Written	4
	Fundamentals of traffic operations and control					
E	CIVIL-457	GC	Geroliminis	Win	During the semester	4
	Geomechanics					
E	CIVIL-402	GC	Ferrari Laloui	Win	Written	5

	Geothermal resource development					
E	CIVIL-470	GC	Kushnir	Win	During the semester	3
	Hydrological risks and structures					
F	ENV-524	SIE	Ancey	Win	During the semester	3
	Hydropower schemes and pumped-storage					
E	CIVIL-469	GC	De Cesare Manso	Sum	Written	4
	Indoor air quality and ventilation					
E	CIVIL-460	GC	Licina	Sum	During the semester	4
	Innovation for construction and the environment					
E	CIVIL-424	GC	Terzis	Win	During the semester	3
	Irrigation and drainage engineering					
E	ENV-549	SIE	Perona	Win	Oral	4
	Machine learning for predictive maintenance applications					
E	CIVIL-426	GC	Fink	Win	During the semester	6
	Materials and structures					
E	CIVIL-532	GC	Denarié	Win	Oral	3
	Mathematical modelling of behavior					
E	MATH-463	MA	Bierlaire	Win	Written	5
	Mobility engineering					
F	CIVIL-451	GC	Tufo	Win	During the semester	3
	Multiscale modelling in mechanics					
E	CIVIL-408	GC	Karapiperis	Win	During the semester	4
	Nonlinear analysis of structures					
E	CIVIL-449	GC	Lignos Saloustros	Win	Written	6
	Optional interdisciplinary project					
E	CIVIL-493	GC	Profs divers	Sum Win	During the semester	4
	Reinforced concrete structures - advanced topics					
E	CIVIL-512	GC	Ruggiero	Sum	Written	4
	Risk analysis and management					
F	CIVIL-438	GC	Defert	Win	Oral	2
	Rock mass characterization for engineering design					
E	CIVIL-496	GC	Orellana Violay	Sum	During the semester	4
	Seismic engineering					
E	CIVIL-522	GC	Lignos Saloustros Tomic	Sum	Written	6
	Slope stability					
E	CIVIL-530	GC	Ferrari	Sum	Written	3
	Stability of structures					
E	CIVIL-409	GC	Lignos Sousa	Sum	Written	4
	Steel structures, selected topics					
E	CIVIL-526	GC	Nussbaumer	Win	Written	3
	Thermodynamics of comfort in buildings					
E	CIVIL-450	GC	Khovalyg	Sum	During the semester	3

Timber construction						
E	CIVIL-433	GC	Natterer	Sum	Oral	3
Transportation economics						
E	CIVIL-455	GC	Geroliminis Yang de Palma	Sum	During the semester	3
Transportation network modeling & analysis						
E	CIVIL-477	GC	Zhang	Sum	Oral	3
Underground construction						
E	CIVIL-404	GC	Sandrone	Sum	During the semester	3
Urban hydraulic systems						
E	CIVIL-413	GC	Pfister	Sum	Oral	3
Water resources engineering and management						
E	CIVIL-466	GC	Bieri Perona Zeimetz	Sum	Written	5