

Studies Plan

Génie civil 2024-25

Block "Cross-disciplinary team projects"

Courses			Exam Session	Exam	Credit
Lang.	Code	Sect. Teacher			
F	Semaine ENAC		Sum		4
F	Unités d'enseignement ENAC		Sum		4

Block 1

Courses			Bachelor 3	Bachelor 4	Bachelor 5	Bachelor 6	Exam Session	Exam	Credit
Lang.	Code	Sect. Teacher	C E L T P I	C E L T P I	C E L T P I	C E L T P I			
F	Analysis III MATH-203(b)	MA Strütt	2h 2h				Win	Written	4
E	Analysis IV MATH-207(d)	MA Licht		2h 2h			Sum	Written	4
E	Introduction to optimization and operations research MATH-265	GC Bierlaire	2h 2h				Win	Written	4
F	Probability and statistics MATH-234(a)	MA Goldstein	2h 1h				Win	Written	3

Block 2

Courses			Bachelor 3	Bachelor 4	Bachelor 5	Bachelor 6	Exam Session	Exam	Credit
Lang.	Code	Sect. Teacher	C E L T P I	C E L T P I	C E L T P I	C E L T P I			
F	Continuum mechanics (for GC) CIVIL-225	GC Molinari	3h 2h				Win	Written	5
E	Engineering a sustainable built environment CIVIL-239	GC Sonta	2h 1h				Win	Written	3
F	Fluids mechanics (For GC) CIVIL-210	GC Ancey		3h 2h			Sum	Written	5
E	Structural mechanics (for GC) CIVIL-238	GC Vassilopoulos		2h 2h			Sum	Written	4

Block 3

Courses			Bachelor 3	Bachelor 4	Bachelor 5	Bachelor 6	Exam Session	Exam	Credit
Lang.	Code	Sect. Teacher	C E L T P I	C E L T P I	C E L T P I	C E L T P I			
E	Fundamentals of indoor climate CIVIL-212	GC Licina	1h 1h				Win	During the 2 semester	
F	Geology CIVIL-211	GC Müntener Vanardois Violay	2h 1h	1h			Win	During the 4 semester	
E	Introduction to machine learning for engineers CIVIL-226	GC Alahi Fink		2h 3h			Sum	During the 5 semester	
E	Introduction to transportation systems CIVIL-355	GC Bierlaire		2h 1h			Sum	During the 3 semester	
E	Soil mechanics and flow through porous media CIVIL-203	GC Karapiperis		3h 2h	1h		Sum	Written	5

Block 4

Courses			Bachelor 3	Bachelor 4	Bachelor 5	Bachelor 6	Exam Session	Exam	Credit
Lang.	Code	Sect.	Teacher	C E L T P I	C E L T P I	C E L T P I	C E L T P I		
	Design of steel structures								
F	CIVIL-235	GC	Nussbaumer			3h 2h	Sum	Written	5
	Geotechnical engineering								
F	CIVIL-306	GC	Lecampion			3h 2h	Sum	Written	5
	Hydraulic structures and schemes								
F	CIVIL-312	GC	Amini De Cesare Manso		3h 2h		Win	Written	5
	Numerical analysis								
E	MATH-251(a)	MA	Kressner		2h 1h		Win	Written	3
	Numerical modelling of solids and structures								
F	CIVIL-321	GC	Anciaux Molinari			2h 2h	Sum	Written	4
	Reinforced concrete structures								
E	CIVIL-323	GC	Ruggiero		3h 2h		Win	Written	5
	Rock mechanics								
F	CIVIL-308	GC	Sandrone Violay		3h 2h		Win	Written	5
	Traffic engineering								
E	CIVIL-349	GC	Geroliminis		2h 2h		Win	During the semester	4
	Urban public transport systems								
E	CIVIL-324	GC	Yao Zhang			2h 1h	Sum	During the semester	3
	Urban Thermodynamics								
E	CIVIL-309	GC	Khovalygy		2h 1h		Win	During the semester	3

Block 5

Courses			Bachelor 3	Bachelor 4	Bachelor 5	Bachelor 6	Exam Session	Exam	Credit
Lang.	Code	Sect.	Teacher	C E L T P I	C E L T P I	C E L T P I	C E L T P I		
	Project in civil engineering								
F	CIVIL-390	GC	Profs divers				5h Sum	During the semester	5

Block 6

Courses			Bachelor 3	Bachelor 4	Bachelor 5	Bachelor 6	Exam Session	Exam	Credit
Lang.	Code	Sect.	Teacher	C E L T P I	C E L T P I	C E L T P I	C E L T P I		
	Data Science for infrastructure condition monitoring								
E	CIVIL-332	GC	Fink			2h 1h	Sum	During the semester	3
	Dimensioning of Timber structures								
F	CIVIL-331	GC	Natterer		2h 1h		Win	Written	3
	Estimation methods								
F	ENG-267	SIE	Skaloud		2h 2h		Win	Written	4
	Geographic information system (GIS)								
F	ENV-342	SIE	Joost			2h 2h 1h	Sum	Written	5
	Heat and mass transfer								
E	ME-341	GM	Tagliabue			3h 1h	Sum	Written	4
	Hydrology for engineers								
E	ENV-221	SIE	Bonetti		2h 2h		Win	Written	5
	Numerical representation / BIM								
F	CIVIL-307	GC	Domer			2h 1h	Sum	During the semester	3
	Signals, instruments and systems								
E	ENG-366	SIE	Martinoli			2h 2h	Sum	Written	5

Transverse block HSS

Courses			Exam Session	Exam	Credit
Lang.	Code	Sect. Teacher			
		SHS : Bachelor cycle BA6			
F		SHS			2
		HSS : Bachelor cycle BA5			
F		SHS			2
		HSS : Bachelor cycle BA4			
F		SHS			2
		HSS : Bachelor cycle BA3			
F		SHS			2