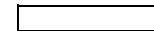


Programme in French - 25 ECTS minimum

Structural conception : calculation of beams stresses, dimensioning of concrete and steel structural elements (drawing and CAD), apprehension of soil-structure connections

General construction: materials, building conception (architecture, rehabilitation, safety and accessibility), surveying and road modelling, construction processes of underground works

Code	Subjects	Lectures	Tutorials	Practical work	Exam	Project	Workload (h)	ECTS	Language
TC3CS6	Computer science			ü		ü	64	3	FR
TC3RSE6	Research scientific experiment	ü		ü	ü	ü	34	2	FR
TC3MST6	Structural mechanics	ü	ü	ü	ü		106	5	FR
TC3RC6	Reinforced concrete	ü	ü	ü	ü		88	4	FR
TC3PC6	Prestressed concrete	ü	ü	ü	ü		46	2	FR
TC3MS6	Metal structures	ü	ü	ü	ü		70	3	FR
TC3SSROB6	Structure software - ROBOT	ü	ü	ü	ü		32	2	FR
TC3SM6	Soil mechanics	ü	ü	ü	ü		58	3	FR
TC3M6	Materials	ü	ü	ü	ü	ü	86	4	FR
TC3GC6	General construction		ü	ü	ü	ü	54	3	FR
TC3TO6	Topography		ü	ü	ü	ü	24	1	FR
TC3CGP6	Construction general process	ü	ü	ü	ü		36	2	FR
TC3BIMI6	BIM - Introduction	ü	ü	ü	ü		20	1	FR
Elective subjects									
TC3FLE6	French as a foreign language	ü	ü	ü	ü		66	3	FR
TC3E6	English	ü	ü	ü	ü		64	3	FR

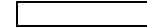


Programme in French - 25 ECTS minimum

2 projects including : metal and concrete structures - foundations and calculations - Human and financial management

1 research and innovation project including bibliographic research and issue address .

Code	Subjects	Lectures	E-learning	Tutorials	Practical work	Exam	Project	Workload (h)	ECTS	Language
Structures										
TC4MS7	Metal structures	ü	ü	ü	ü	ü	ü	84	4	FR
TC4RC7	Reinforced concrete	ü	ü	ü	ü	ü	ü	84	4	FR
Management										
TC4LL7	Law and legislation	ü	ü	ü	ü	ü	ü	54	3	FR
TC4COM7	Company organization and management	ü	ü	ü	ü	ü	ü	42	2	FR
TC4WOM7	Works organization and management	ü	ü	ü	ü	ü	ü	84	4	FR
TC4HSM7	Human sciences and management	ü	ü	ü	ü	ü	ü	88	4	FR
TC4EM7	Ethic management	ü	ü	ü	ü	ü	ü	10	1	FR
Research and innovation										
TC4RIP7	Research and innovation project	ü	ü	ü	ü	ü	ü	44	2	FR
TC4BIMA7	BIM Allplan	ü	ü	ü	ü	ü	ü	40	2	FR
Elective subjects										
TC3FLE7	French as a foreign language	ü	ü	ü	ü	ü	ü	66	3	FR
TC3E7	English	ü	ü	ü	ü	ü	ü	48	2	FR



Programme with English and French taught subjects - Minimum 25 ECTS

Innovations and green building

Agile building and 4.0 building

Code	Subjects	Lectures	Tutorials	Practical work	Exam	Project	Workload (h)	ECTS	Language
Sustainable building									
TC4LCA8	Life Cycle Analysis	ü	ü		ü	ü	56	3	EN
TC4H8	Hydraulics	ü	ü			ü	50	2	EN
TC4STB8	Sustainable timber building					ü	50	2	EN
TC4BET8	Building and energy transition	ü				ü	58	3	FR
TC4SC8	Sustainable city	ü	ü	ü		ü	46	2	FR/EN
TC4ESB8	Environmental stakes in building	ü				ü	42	2	FR/EN
Agile building									
TC4WP8	Works planning	ü				ü	54	3	FR/EN
TC4EDV8	Engineering dynamics and vibrations	ü		ü		ü	60	3	FR/EN
TC4RM8	Risk management	ü			ü		18	1	FR/EN
TC4SP8	Structure project - Reinforced concrete and geotechnics						30	2	EN
TC4RR8	Renovation -Rehabilitation	ü	ü			ü	48	2	EN
4.0 building									
TC4PM8	Project management	ü				ü	48	2	FR/EN
TC4BIM8	BIM -REVIT	ü	ü	ü		ü	160	7	EN
TC4RHM8	Road and highways (3D) modeling	ü	ü			ü	48	2	EN
TC4SSI8	Soils and structures instrumentation	ü	ü	ü		ü	30	2	EN
Options - Elective subjects									
TC4FLE8	French as a Foreign Language	ü			ü		66	3	FR
TC4FLE2	English	ü			ü		98	4	EN





YEAR 5 Semester 9 Sustainable Building

End-of-study project / Final project - Minimum 28 ECTS (Technical module + final project)

Sustainable building : advanced technical education and project in groups of 4 or 5 students . On a given plot, the group has to design a building with public access and accommodations: architecture, fire safety, accessibility, acoustic, thermic, sustainable development, pricing, methods and planning . A full project which leads to the final tender .

Code	Subjects	Lectures	Tutorials	Practical work	Exam	Project	Workload	ECTS	Language
Technical modules									
TCSB5D9	Sustainable development	ü				ü	18	1	FR
TCSBLCB9	Low Carbon Building	ü				ü	30	2	FR
TCSBSIH9	Fire safety and handicap	ü				ü	36	2	FR
TCSBA9	Acoustics	ü	ü		ü		34	2	FR
TCSBRB9	Building rehabilitation	ü	ü			ü	58	3	FR
TCSBAQEM9	Tender and market research	ü	ü		ü		48	2	FR
TCSBGC9	Climatic engineering	ü	ü		ü		66	3	FR
TCSBTS9	Sanitary technics	ü	ü			ü	26	2	FR
TCSBE9	Electricity	ü	ü			ü	32	2	FR
Final Projet									
			ü	ü		ü	186	8	FR
Elective subjects									
TCSBLM9	Lean management	ü		ü		ü	30	2	FR
TCSBQSE9	Quality Safety Environment	ü			ü		28	2	FR
TCSBGC9	French General Culture	ü		ü	Oral exam		82	4	FR
TCSBFLE9	French as a foreign language	ü	ü		ü		66	3	FR

End-of-study project / Final project - 28 ECTS minimum (Technical modules + final project)

Public and civil engineering works , town and country planning : advanced technical education and project in groups of 4 or 5 students . Given a specific area, the team will have to design art of road and a bridge: Road layout, road worksite organisation and management, bridge conception and methods,topography, pricing, lightening and signaling A full project which leads to the final tender .

Code	Subjects	Lectures	Tutorials	Practical work	Exam	Project	Workload	ECTS	Language
Technical modules									
TCSCELE9	Layouts ,earthwork and roadways	ü		ü		ü	120	5	FR
TCSCEB39	Bridge conception	ü		ü		ü	40	2	FR
TCSCEB49	Bridge execution method	ü		ü		ü	40	2	FR
TCSCEW09	Road worksite organisation	ü			ü		42	2	FR
TCSCEB99	Roadways and networks	ü	ü	ü	ü		52	3	FR
TCSCEB99	Road traffic	ü		ü	ü		28	2	FR
TCSCELS9	Lightening and signalling	ü				ü	18	1	FR
TCSCEEP9	Civil Engineering pricing	ü	ü		ü		32	2	
Final Project									
			ü			ü	118	5	FR
Elective subjects									
TCSCEP99	Pathology and maintenance of PW	ü	ü		ü		54	3	FR
TCSCEUW9	Underground works	ü				ü	30	2	FR
TCSCEMAW9	Maritime and airport works	ü	ü		ü		54	3	FR
TCSCEMAW9	Railways	ü			ü		22	1	FR
TCSCEFGC9	French General Culture	ü	ü		Oral exam		32	2	FR
TCSBFLE9	French as a foreign language	ü	ü		ü		66	3	FR