

Studies Plan

Sciences et ingénierie de l'environnement 2023-24

Block 1

Courses		Master 1	Master 2	Exam Session	Exam	Credit		
Language	Code	Section	Teacher	Specialization	p	I e p		
Design project	ENV-596	SIE	Profs divers		4h	Sum	During the semester	10
Projet SIE individuel	ENV-591(a)	SIE	Profs divers		4h	Sum Win	During the semester	10
HSS : Introduction to project		SHS				Win		3
HSS : Project		SHS				Sum		3

Block 2

Courses		Master 1	Master 2	Exam Session	Exam	Credit			
Language	Code	Section	Teacher	Specialization	p	I e p			
Atmospheric processes: from cloud to global scales	E	ENV-407	SIE	Berne Gehring Nenes	2h 3h		Win	Written	5
Sensing and spatial modeling for earth observation	E	ENV-408	SIE	Berne Skaloud Tuia	2h 3h	Sum	Written	5	
Water and wastewater treatment	E	ENV-405	SIE	Gu Holliger von Gunten	2h 2h	Win	Written	5	
Water resources engineering	E	ENV-424	SIE	Rinaldo Trevisin	2h 3h	Win	Written	5	

Group 1 (30 crédits en option et 30 crédits dans un mineur)

Courses		Master 1	Master 2	Exam Session	Exam	Credit		
Language	Code	Section	Teacher	Specialization	p	I e p		
Advanced satellite positioning	E	ENV-542	SIE		2h 2h	Sum	During the semester	4
Air pollution	E	ENV-409	SIE	Reimann Bhend Takahama	2h 1h	Sum	Written	5
Applied data analysis	E	CS-401	SC	West	2h 2h	Win	Written	8
Applied ecology	E	ENV-422	SIE	Grossiord	2h 1h 1h	Win	During the semester	4
Applied wastewater engineering	E	ENV-509	SIE	Mattle	2h 1h	Win	During the semester	3
Bio-engineering for rivers and natural systems	F	ENV-420	SIE	Adam	2h	Sum	Written	2
Biomineralization: from nature to application	E	ENV-406	SIE	Adams Meibom	2h 1h	Win	During the semester	4

E	Climate and water sensitive urban design ENV-526	SIE	Manoli	2h	2h	Sum	During the 4 semester
F	Contracts and professional responsibility ENV-466	SIE	Dubey	3h		Sum	During the 3 semester
E	Development engineering ENV-470	SIE	Makohloso Schönenberger	2h	2h	Sum	During the 4 semester
E	Distributed information systems CS-423	SC	Aberer	2h 1h		Win	Written 6
E	Distributed intelligent systems ENG-466	SIE		2h 3h		Sum	Oral 5
E	Ecotoxicology ENV-306	SIE		2h 1h 1h		Sum	During the 4 semester
F	ENAC project PENS-490	GC	Profs divers	4h	4h	Sum Win	During the 4 semester
E	Energy conversion and renewable energy ME-409	GM	Maréchal Nguyen	2h 1h 1h		Win	Written 4
E	Environmental economics ENV-471	SIE	Thalmann	2h 1h		Sum	During the 4 semester
E	Environmental transport phenomena ENG-420	SIE	Crouzy Porté-Agel	2h 1h		Win	Written 5
E	Exploratory data analysis in environmental health ENV-444	SIE		1h 2h		Win	Oral 4
E	Fate and behaviour of environmental contaminants ENV-507	SIE	Aeppli		2h 1h	Sum	During the 4 semester
F	Fluvial hydraulics and river training works CIVIL-410	GC	André Arborino De Cesare	2h 1h		Win	Oral 3
E	Global change ecology and fluvial ecosystems ENV-512	SIE	Battin Robison	2h 2h		Win	Written 4
E	Groundwater and soil remediation ENV-504	SIE		2h 1h		Sum	Oral 4
E	Hydrogeophysics ENV-523	SIE	Holliger	2h 1h		Sum	During the 3 semester
F	Hydrological risks and structures ENV-524	SIE	Ancey	1h 2h		Win	During the 3 semester
E	Image processing for Earth observation ENV-540	SIE	Tuia	2h 1h		Win	During the 4 semester
E	Image processing I MICRO-511	MT	Unser Van De Ville	3h		Win	Written 3
E	Image processing II MICRO-512	MT	Sage Unser Van De Ville	3h		Sum	Written 3
F	Impact studies ENG-474	GC	Devanthéry Helfer Schmidt	2h 1h		Win	Oral 3
E	Indoor air quality and ventilation CIVIL-460	GC	Licina	2h 2h		Sum	During the 4 semester
E	Irrigation and drainage engineering ENV-549	SIE	Perona	2h 2h		Win	Oral 4
F	Land management and ground law ENV-460	SIE		3h		Win	Written 3

E	Limnology ENV-425	SIE	Tofield-Pasche	2h	2h	Sum	Oral	5
E	Material and energy flow analysis ENV-501	SIE	Binder Hecher Moreau	2h	1h	Win	During the 4 semester	
E	Multivariate statistics in R ENV-513	SIE	Peter	2h	1h	Win	Written	4
E	Occupational and environmental health ENV-468	SIE	Vernez	2h	1h	Win	Oral	3
E	Physics and hydrology of snow ENV-525	SIE	Huwald Lehning	2h	2h	Win	Written	4
E	Recycling of materials MSE-463	MX	Leterrier		2h	Sum	During the 2 semester	
F	River eco-morphology ENV-418	GC	De Cesare Gostner	2h	1h	Win	During the 3 semester	
E	Sanitary engineering in developing countries ENV-402	SIE	Lüthi	2h	1h	Win	Written	3
E	Science of climate change ENV-410	MTE	Schmale	2h	2h	Win	Written	4
E	Sensor orientation ENV-548	SIE	Skaloud		2h	Sum	During the 4 semester	
F	SIE project ENV-597	SIE	Profs divers	4h	4h	Sum Win	During the 4 semester	
E	Solid waste engineering ENV-500	SIE	Ludwig	2h	1h	Win	During the 4 semester	
E	Summer workshop PENS-491	GC	Profs divers	40h		Win	During the 4 semester	
E	Sustainability assessment of urban systems ENV-461	SIE	Duygan Wall Gago		2h	1h	Sum	During the 3 semester
F	Systems of environmental management ENV-469	SIE	Baracchini	1h	1h	Win	During the 2 semester	
E	Urban Green&Blue infrastructure and global warming ENV-462	SIE	Kazemi		1h	2h	Sum	During the 3 semester
F	Urban hydrology ENV-417	SIE	Rossi		2h	1h	Sum	During the 4 semester
E	Water resources management CIVIL-466	GC	Bieri Leite Ribeiro Perona		2h	1h	Oral	3

Master project

	Courses		Master 1	Master 2	MP Autumn	MP Spring	Exam Session	Exam	Credit
<i>Language</i>	<i>Code</i>	<i>Section</i>	<i>Teacher</i>	<i>Specialization</i>	<i>p</i>	<i>I</i>	<i>e</i>	<i>p</i>	
Engineering internship credited with master project (master in Environmental sciences and engineering)									
F	ENV-598	SIE	Profs divers		320h	320h	320h	Sum Win	Term paper 0
Master project in Environmental Sciences and Engineering									
	ENV-599	SIE	Profs divers			900h	900h	Sum Win	Oral
									30