

## Studies Plan

### Sciences et ingénierie de l'environnement 2023-24

#### Block "Cross-disciplinary team projects"

Courses			Exam Session	Exam	Credit
Language Code	Section	Teacher			
<b>Semaine ENAC</b>					
F	ENAC		Sum		4
<b>Unités d'enseignement ENAC</b>					
F	ENAC		Sum		4

#### Block 1

Courses			Bachelor 3	Bachelor 4	Bachelor 5	Bachelor 6	Exam Session	Exam	Credit
Language Code	Section	Teacher	l e p	l e p	l e p	l e p			
F	<b>Analysis III</b> MATH-203(c) MA	Basterrechea	2h	2h			Win	Written	4
F	<b>Analysis IV</b> MATH-207(d) MA	Basterrechea		2h	2h		Sum	Written	4
E	<b>Fluid mechanics (for SIE)</b> ENG-272 SIE	Porté Agel		3h	2h		Sum	Written	5
E	<b>General physics: electromagnetism</b> PHYS-201(e) PH	Scarlino	2h	2h			Win	Written	4

#### Block 2

Courses			Bachelor 3	Bachelor 4	Bachelor 5	Bachelor 6	Exam Session	Exam	Credit
Language Code	Section	Teacher	l e p	l e p	l e p	l e p			
E	<b>Environmental chemistry</b> ENV-200 SIE	Aeppli Kohn	3h	2h			Win	Written	5
E	<b>Fundamentals in ecology</b> ENV-220 SIE	Battin Grossiord		3h	2h		Sum	Written	5
E	<b>Microbiology for engineers</b> ENV-202 SIE	Bernier-Latmani		3h	2h	1h	Sum	Written	5
	<b>Soil sciences</b> ENV-222 SIE	Bullinger Manoli	2h	2h	1h		Win	Written	5

#### Block 3

Courses			Bachelor 3	Bachelor 4	Bachelor 5	Bachelor 6	Exam Session	Exam	Credit
Language Code	Section	Teacher	l e p	l e p	l e p	l e p			
E	<b>Computational methods and tools</b> ENG-270 SIE	Takahama	3h	3h			Win	During the 6 semester	6
F	<b>Estimation methods</b> ENG-267 SIE	Skaloud	2h	2h			Win	Written	4
F	<b>Geographic information system (GIS)</b> ENV-342 SIE	Joost		2h	2h	1h	Sum	Written	5

#### Block 4

Courses			Bachelor 3	Bachelor 4	Bachelor 5	Bachelor 6	Exam Session	Exam	Credit	
Language Code	Section	Teacher	l e p	l e p	l e p	l e p				
F	<b>Environmental and construction law</b> ENV-367 SIE	Romy			3h	1h	Win	Written	4	
	<b>Environmental system analysis and assessment</b> ENV-370 SIE	Athanassiadis Payet				3h	2h	Sum	Written	5

E	<b>Hydrology for engineers</b> ENV-221	SIE	Bonetti Rinaldo	3h	2h			Win	Written	5
E	<b>Numerical analysis</b> MATH-251(a)	MA	Antolin Sanchez Sande	2h	1h			Win	Written	3
E	<b>Physics and chemistry of the atmosphere</b> ENV-320	SIE	Huwald Lehning Nenes Schmale	3h	2h	1h		Sum	Written	5

#### Block 5

Courses			Bachelor 3	Bachelor 4	Bachelor 5	Bachelor 6	Exam Session	Exam	Credit	
Language	Code	Section	Teacher	l e p	l e p	l e p	l e p			
F	<b>Hydraulic structures and schemes</b> CIVIL-312	GC	De Almeida Manso De Cesare				3h 2h	Sum	Written	5
F	<b>Introduction to control of dynamical systems</b> ME-273	GM	Müllhaupt				2h 1h	Sum	Written	3
F	<b>Remote sensing</b> ENV-341	SIE	Berne Tuia				2h 1h	Sum	Written	3
E	<b>Signals, instruments and systems</b> ENG-366	SIE	Martinoli			2h 3h		Win	Written	5
F	<b>Treatment and valorization of water and waste</b> ENV-304	SIE	Clericetti Derlon Monnin			3h 2h		Win	Written	5

#### Block 6

Courses			Bachelor 3	Bachelor 4	Bachelor 5	Bachelor 6	Exam Session	Exam	Credit	
Language	Code	Section	Teacher	l e p	l e p	l e p	l e p			
E	<b>Aquatic ecosystems</b> ENV-321	SIE	Battin				2h 1h	Sum	Written	3
E	<b>Introduction to machine learning</b> CS-233	IN	Fua Salzmann				2h 2h 2h	Sum	Written	6
E	<b>Introduction to optimization and operations research</b> MATH-265	GC	Bierlaire			2h 2h		Win	Written	4
	<b>Pollutants analysis in the environment</b> ENV-300	SIE	Breider Ludwig Mulattieri			3h		Win	During the semester	3
F	<b>Urban and regional planning and Management</b> ENV-361	SIE	Leroy				2h 1h	Sum	Written	3

#### Transverse block HSS

Courses			Exam Session	Exam	Credit
Language	Code	Section	Teacher		
F	<b>SHS : Bachelor cycle BA6</b> SHS				2
F	<b>HSS : Bachelor cycle BA5</b> SHS				2
F	<b>HSS : Bachelor cycle BA4</b> SHS				2
F	<b>HSS : Bachelor cycle BA3</b> SHS				2