

Studies Plan

Ingénierie des sciences du vivant 2024-25

Bloc 3 "Ingénierie/Engineering"

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	BIO-341	SV	Naef Shillcock													2h	2h							Win	Written	4				
F	EE-295	EL	Guiducci Koukab Meinen													2h	2h							Win	Written	4				
F	MICRO-310(b) MT		Unser													2h	2h							Win	Written	4				
F	MICRO-311(b) EL		Vandergheynst																					2h	2h	Sum	Written	4		

Bloc 4 "Bio-Ingénierie / BioEngineering"

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	BIO-221	SV	Gönczy Oates													2h	2h							Win	During the semester	4				
F	EE-296	EL	Koukab Meinen																					2h	2h	Sum	During the semester	4		
E	BIOENG-312	SV	Stergiopoulos																					2h	2h	Sum	Written	4		
E	BIOENG-399	SV	Tang																					2h	2h	Sum	Written	4		
E	ME-231(b)	SV	Fantner													3h	1h							Win	Written	4				
E	BIOENG-320	SV	Barth																					2h	2h	Sum	Written	4		

Bloc 5 "Sciences du vivant / Fundamentals of Life Sciences"

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	BIO-310	SV	Lemaitre Suter													3h	1h							Win	Written	4				
E	BIO-372	SV	McKinney																					2h	2h	Sum	During the semester	4		
F	BIO-320	SV	Zufferey													3h	1h							Win	Written	4				
F	BIO-321	SV	Zufferey																					3h	1h	Sum	Written	4		
E	BIO-311	SV	Ramdyia													2h	2h							Win	During the semester	4				
E	BIO-392	SV	Constam De Palma																					2h	2h	Sum	Written	4		

Block 1 "Mathematics and Physics"

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			
			Analysis III (for SV, MT)						
E	MATH-203(a)	MA Monin	2h 2h				Win	Written	4
			Analysis IV (for SV, MT)						
E	MATH-207(a)	MA Zemel		2h 2h			Sum	Written	4
			Biological data science I: statistical learning						
E	BIOENG-210	SV La Manno		2h 2h			Sum	Written	4
			General physics : electromagnetism						
F	PHYS-201(a)	PH Loizu	4h 2h				Win	Written	6
			General physics : quanta						
F	PHYS-207(a)	PH Savona		2h 2h			Sum	Written	4
			Numerical analysis						
F	MATH-251(c)	MA Deparis		2h 2h			Sum	Written	4
			Probability and statistics (for SV)						
E	MATH-235	MA Stensrud	2h 2h				Win	Written	4

Block 2 "Life sciences and Computer-aided engineering"

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			
			Applied software engineering for life sciences						
E	BIO-210	SV Mathis	2h 2h				Win	During the semester	4
			Biological chemistry I						
E	BIO-212	SV Antanasijevic Dal Peraro	2h 2h				Win	Written	4
			Biological chemistry II						
E	BIO-213	SV D'Angelo		2h 2h			Sum	Written	4
			Cellular and molecular biology I						
E	BIO-205	SV Goemans	2h 2h				Win	Written	4
			Cellular and molecular biology II						
E	BIO-207	SV Karthaus		2h 2h			Sum	Written	4
			Integrated labo in Life sciences I						
F	BIO-203	SV Bezler		3h			Sum	During the semester	6
			Integrated labo in Life sciences II						
F	BIO-204	SV Bezler		3h			Sum	During the semester	6

Block 6 "Biologie quantitative et données / Quantitative biology & data"

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			
			Genetics and genomics						
E	BIO-373	SV Deplancke Fellay			2h 1h	1h	Win	Written	4
			Introduction to machine learning for bioengineers						
E	BIO-322	SV Brea			2h 2h		Win	Written	4
			Randomness and information in biological data						
E	BIO-369	SV Bitbol				2h 2h	Sum	Written	4

Block 7 "Physiologie / Physiology"

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			
Bachelor project in Life sciences																								
E	BIOENG-390	SV	Profs divers																		5h Sum	During the 5 semester	5	
Genomic solutions to sustainable development																								
E	BIO-312	SV	Fellay Waszak																		2h	Sum	Written	2
Physiology by systems																								
F	BIO-377	SV	Roy																		3h 1h	Sum	Written	4
Physiology lab I																								
F	BIO-378	SV	Pexieder																		3h	Sum	Oral	5
Physiology lab II																								
F	BIO-379	SV	Pexieder																		2h	Sum	Oral	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