

Studies Plan

Statistique 2023-24

Block 1

Courses			Master 1	Master 2	Exam Session	Exam	Credit
Language	Code	Section	Teacher	Specialization			
E	Applied statistics MATH-516 MA		Mhalla Ep Marchand	1h 3h	Sum	During the semester	5
E	Multivariate statistics MATH-444 MA		Panaretos	2h 2h	Sum	Written	5
E	Randomization and causation MATH-336 MA		Stensrud	2h 2h	Sum	Written	5
E	Regression methods MATH-408 MA		Davison	2h 2h	Win	Written	5
E	Statistical computation and visualisation MATH-517 MA		Mhalla Ep Marchand	2h 2h	Win	During the semester	5
E	Statistical inference MATH-562 MA		Davison	2h 2h	Win	Written	5

Block 2

Courses			Exam Session	Exam	Credit
Language	Code	Section	Teacher	Specialization	
	HSS : Introduction to project SHS		Win		3
	HSS : Project SHS		Sum		3

Group 1 (.)

Courses			Master 1	Master 2	Exam Session	Exam	Credit
Language	Code	Section	Teacher	Specialization			
E	Algorithms II CS-450 IN		Svensson	4h 3h	Win	Written	8
E	Applied biostatistics MATH-493 MA		Goldstein	2h 2h	Sum	During the semester	5
E	Applied data analysis CS-401 SC		West	2h 2h	Win	Written	8
E	Artificial neural networks/reinforcement learning CS-456 IN		Gerstner	2h 2h	Sum	Written	6
E	Biostatistics MATH-449 MA		Stensrud	2h 2h	Sum	Written	5
E	Computational linear algebra MATH-453 MA		Kressner	2h 2h	Sum	Written	5
E	Convex optimization MGT-418 MTE		Kuhn	2h 2h	Win	Written	5
E	Data visualization COM-480 SC		Vuillon	2h 2h	Sum	During the semester	6
E	Deep learning EE-559 EL		Cavallaro	2h 2h	Sum	During the semester	4
E	Derivatives FIN-404 IF		Hugonnier	3h 2h	Sum	Written	6
E	Exploratory data analysis in environmental health ENV-444 SIE			1h 2h	Win	Oral	4
E	Financial big data FIN-525 IF		Challet	3h	Win	During the semester	3

E	Foundations of Data Science									
	COM-406	IN	Gastpar Urbanke	4h	2h		Win	Written	8	
	Gaussian processes									
E	MATH-426	MA			2h	2h	Sum	Oral	5	
	Genetics and genomics									
E	BIO-373	SV	Deplancke Fellay	2h	1h	1h	Win	Written	4	
	Genomics and bioinformatics									
E	BIO-463	SV	Luisier Rougemont		2h	2h	Sum	During the semester	4	
	Information security and privacy									
E	COM-402	IN	Payer	3h	1h	2h	Win	Written	8	
	Learning theory									
E	CS-526	IN	Macris		2h	2h	Sum	Written	6	
	Low-rank approximation techniques									
E	MATH-403	MA		2h	2h		Win	Oral	5	
	Martingales in financial mathematics									
E	MATH-470	MA	Schmutz		2h	2h	Sum	Oral	5	
	Mathematical foundations of signal processing									
E	COM-514	SC		3h	2h		Win	Written	6	
	Mathematical modelling of behavior									
E	MATH-463	MA	Bierlaire	2h	2h		Win	Written	5	
	Mathematics of data: from theory to computation									
E	EE-556	EL	Cevher	3h	3h		Win	Written	6	
	Measure and integration									
F	MATH-303	MA	Ott	2h	2h		Win	Written	5	
	Nutrition: from molecules to health									
E	BIO-441	SV	Descombes Hager Rezzi	2h	2h		Win	During the semester	4	
	Optimization for machine learning									
E	CS-439	IN	Flammarion Jaggi		2h	2h	1h	Sum	Written	8
	Probability and stochastic calculus									
E	FIN-415	IF	Filipovic Perazzi	3h	2h		Win	Written	6	
	Probability theory									
E	MATH-432	MA	Mountford	2h	2h		Win	Written	5	
	Risk, rare events and extremes									
E	MATH-447	MA			2h	2h	Sum	Written	5	
	Statistical analysis of network data									
E	MATH-448	MA	Olhede	2h	2h		Win	Written	5	
	Statistical genetics									
E	MATH-438	MA	Goldstein		2h	2h	Sum	During the semester	5	
	Statistical machine learning									
E	MATH-412	MA	Obozinski	2h	2h		Win	Written	5	
	Statistical theory									
E	MATH-442	MA		2h	2h		Win	Written	5	
	Statistics for genomic data analysis									
E	MATH-474	MA			2h	2h	Sum	During the semester	5	
	Stochastic processes									
E	MATH-332	MA	Mountford		2h	2h	Sum	Written	5	
	Stochastic simulation									
E	MATH-414	MA	Nobile	2h	2h		Win	Oral	5	
	Time series									
E	MATH-342	MA	Olhede	2h	2h		Sum	Written	5	

Group 2

Courses			Master 1	Master 2	Exam Session	Exam	Credit	
Language	Code	Section	Specialization	o p	l e p			
	Specialisation semester							
	MATH-580	MA	Profs divers	680h	680h	Sum Win	During the semester	30