

Semester 1 Program August 24 to December 18, 2026		Class Hours					Credits (ECTS)
		Lecture	Practical	Lab	Project	Total	
UE2-01: Statistical Modeling							
- Linear and Generalized Regression*		24		24		48	4
- Time Series 1		18	6	9		33	3
- Data Visualization		9				9	1
<i>Total UE 2-01</i>						90	8
UE2-02: Data Collection and Learning							
- Supervised Learning		18		12		30	2.5
- Option 1: Survey Theory <u>OR</u>		18	3	9		30	3
Option 2: First-Order Methods in Convex Optimization (ATPA)		18	9			27	
- Data Law and Ethics		3				3	0.5
<i>Total UE 2-02</i>						63	6
UE2-03: Computer Science for Data Science							
- Intermediate Computer Science*		6		15		21	2
- Option : Computer Science Project* <u>OR</u>		1		21	12	34	4
Option 2: Algorithmic Programming (ATPA)				18			
<i>Total UE 2-03</i>						55	6
UE2-04: Economic Modeling							
- Option 1: Microeconomic Modeling <u>OR</u>		21				21	2
Option 2: Econ Reinforcement (ATPA)		15				15	
- Econometrics and Causal Inference*		15	9			24	3
<i>Total UE 2-04</i>						45	5
UE2-05: Electives							
Choose 1	Economics Elective	18					
	Signal Processing	15		3		18	1.5
	Advanced Regression Models	18					
- Remedial Computer Science*				12	9	21	1
<i>Total UE 2-05-S</i>						18	2.5
UE2-06: Humanities^(*)							
- Career Project		16		3		19	-
- English as a Foreign Language		30				30	2
- Ecological and Social Transition		6		3		9	0.5
<i>Total UE 2-06</i>						58	2.5
Total 1st semester						329	30

Classes in blue are taught in English only.

* Courses marked with a blue asterisk can be taken in either French or English, both languages are available. Students must choose their language preference.

For English-taught classes, the total credits for semester 1 are 27 ECTS.

(*) To reach 30 ECTS, Erasmus+ students can choose to take additional classes in **UE2-06**: French Language class (2 ECTS) and the Linguistic Tandem Exchange (1 ECTS).

Acronyms:

- ATPA: *Approfondissement Théorique et Programmation Algorithmique* classes are for research orientated students who are interested in pursuing a PhD.

Semester 2 Program January 4 to April 30, 2027		Class Hours					Credits (ECTS)
		Lecture	Practical	Lab	Project	Total	
UE2-07: Statistics Project							
- Statistical Project* et DataViz Challenge <u>OR</u> <i>Methodological Project (ATPA)</i>		1	11.5		20.5	33	6
- Python for Data Science*				18		18	2
<i>Total UE 2-07</i>						51	8
UE2-08: Advanced Statistical Modeling							
- <i>Statistical Methods for Incomplete Data</i> <u>OR</u> Handling Missing Data in Surveys and Survival Analysis		12		12		24	3
- <i>Markov Chains</i>		12	9			21	3
- <i>Nonparametric and Semiparametric Estimation</i>		21				21	3
<i>Total UE 2-08</i>						66	9
UE2-09: Pre-Specialization Electives							
Choice 1	– Bayesian Calculations (ATPA/GS/AP/ID/STD/DGS)	21	6	15			5
	– <i>Time Series 2 and Applied Macroeconometrics</i>	12	6	3		42	2.5
	(E/F/EMOS/GR/MSP/ES/MKT)	21					2.5
Choice 2	Martingales (GR/F/ATPA)	21					
	Software Design	21				21	3
	Spatial Statistics (MSP/ES/E/EMOS)	3		18			
	Course to be determined (AP/GS/SBIO/MKT)						
Choice 3	<i>Markov Models</i> (ATPA)	21					
	<i>Risk Economics</i> (GDR/F)	21					
	Networks, Systems, and UNIX (ID/STD)	12		9		21	3
	<i>Game Theory and Applications</i> (E/EMOS)	21					
	Multistage Sampling (MSP/ES)	12		9			
	<i>Resampling Methods</i> (AP/GS/SBIO/MKT/DGS)	15	3	3			
<i>Total UE 2-09</i>						84	11
UE2-10: Cross-disciplinary Skills (**)							
- Humanities Elective*		24				24	1
- Principles of Corporate Social Responsibility		9				9	0.5
- Engineering Ethics		9				9	0.5
<i>Total UE 2-10</i>						42	2
Total 2nd semester						288	30

Classes in blue are taught in English only.

* Courses marked with a blue asterisk can be taken in either French or English, both languages are available. Students must choose their language preference.

For English-taught classes, the total credits for semester 2 are 26 ECTS.

(**) To reach 30 ECTS, English-speaking Erasmus+ students can choose to take additional classes in **UE2-10**: French Language class (2 ECTS), the Linguistic Tandem Exchange (1 ECTS), and the Ethics class can be replaced with an **independent project in Data Science Ethics** carried out in English (1 ECTS).

Acronyms

AP: Advanced Machine Learning Track

E: Economics and Finance – Economics Track

EMOS: European Master of Official Statistics Track

ES: (Public Decision-Making) Statistical Studies Track

F: Economics and Finance – Finance Track

GR: Risk Management Track

GS: Advanced Statistical Engineering Track

ID: Data Engineering Track

MKT: Quantitative Marketing Track

MSP: (Public Decision-Making) Methodology of Public Statistics

SBIO: Biostatistics Track