

**STATISTICAL METHODS AND APPLICATIONS (SMA)**  
**Academic year 2023-2024**

**Curriculum QUANTITATIVE ECONOMICS**

120 ECTS                      12 Exams + other educational activities

Educational Activities	ECTS	Year	Term
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**Characterizing**                      **Mandatory: no choice**

48 ECTS	1. Stochastic processes	9	1	1
	2. Advances in data analysis and statistical modeling or Probability and Statistics	9	1	1
	3. Sample surveys	9	1	2
	4. Applied econometrics	6	1	2
	5. Efficiency and productivity analysis	9	1	2
	6. Multiple Time Series	6	2	2

**Supplementary**                      **Elective: you can choose courses for the corresponding number of ECTS**

18 ECTS	7-8. Empirical economics	9	1	2
	7-8. International monetary economics	9	1	2
	7-8. Economic History	9	1	2
18 ECTS	9-11. Statistical learning	6	1	2
	9-11. Algorithms and data structures	6	1	2
	9-11. Bayesian modeling	9	2/1	1
	9-11. Computational statistics	9	2/1	1
	9-11. Development Finance	6	2	2
	9-11. Big data analytics	6	2/1	2

**Free choice**                      **Elective: you can choose activities/courses for the corresponding total number of ECTS**

9 ECTS	12. Free-choice exams from the list of available courses/AAF at Sapienza	9	1	1
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**Other educational activities**                      **AAF on INFOSTUD: you can choose activities/courses for the corresponding number of ECTS**

6 ECTS	• Laboratory of stochastic processes	3	1	1
	• Complementary activities	3	1	1
	• Reading seminars	3	1	1
	• Laboratory of financial and monetary statistics	3	1	2
	• Laboratory of machine learning	3	1	2
	• Case studies and statistical consulting	3	1	2
	• Complementary activities	6	2	1

**Master Thesis**

21 ECTS Master Thesis		21	2	2
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