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

Curriculum OFFICIAL STATISTICS

120 ECTS   **12 Exams + other educational activities**

Educational Activities		Ects	Year	Term
Characterizing courses	**Mandatory:** no choice			
54 ECTS	1. Stochastic processes	9	1	1
	2. Bayesian modeling	6	1	1
	or The role of International Organizations in producing Official Statistics	6	1	2
	3. Sample surveys	9	1	2
	4. Data cleaning and integration in official statistics	6	1	2
	5. Data quality and other topics of official statistics	6	1	2
	Laboratory of financial and monetary statistics	3	1	2
	6. Spatial statistics and statistical tools for environmental data	9	2	1
	7. Applied Econometrics	6	**1**	**2**
Supplementary courses	**Elective:** you can choose for each sub-block of activities/courses for the corresponding number of ECTS			
9 ECTS	8. Advances in data analysis and statistical modeling or Probability and Statistics	9	1	1
	8. Computational Statistics	9	2	1
6 ECTS	9. Big data for official statistics	6	1	1
	9. Survey methodology	6	1	2
	9. Algorithms and data structures	6	1	2
	9. Computational Statistics	6	2	1
	9. Big Data Analytics	6	2	2
	9. International Demography	6	2	2
	9. Efficiency and productivity analysis	6	2	2
	9. Multiple Time Series	6	2	2
Free choice	**Elective:** you can choose activities/courses for the corresponding total number of ECTS			
9 ECTS	10. Free-choice exam from the list of available courses and/or AAF at Sapienza	9	**1**	1
Other educational activities	**AAF on INFOSTUD**: you can choose only in the last sub-block of activities for the corresponding number of ECTS			
9 ECTS	11. Internship/Stage	9	1	2
3 ECTS	• Laboratory of stochastic processes	3	1	1
	• Complementary activities	3	1	1
	• Case studies and statistical consulting	3	1	2
	• Laboratory of machine learning	3	1	2
Master Thesis				
30 ECTS		30		