

SYLLABUS

Name of the course:	Statistical methods and econometrics			
Teacher:	Caterina Conegliani			
University / organisation:	University Roma 3 - Department of Economics			
Language of teaching:	English			
ECTS:	9			
Semester (S1, S2, S3 or S4):	<input checked="" type="checkbox"/> S1	<input type="checkbox"/> S2	<input type="checkbox"/> S3	<input type="checkbox"/> S4
Teaching method(s):	<input checked="" type="checkbox"/> Lecture courses		<input type="checkbox"/> Flipped classroom	
	Other:			
Type(s) of evaluation:	<input checked="" type="checkbox"/> Sitting exam		<input checked="" type="checkbox"/> Written report	
	<input type="checkbox"/> Oral defence		<input type="checkbox"/> Group project	
	Other / comments:			
Expected deadline(s) for the evaluation(s)				
Expected date of final results:				
Summary of the content	<p>The main objective of the course is to provide the fundamental tools for the application of statistical methods to the analysis of economic data. The theoretical part will be supported by an applied part devoted to the analysis of real data sets by means of the software R. One lecture per week will be held in the computer lab. A student that has completed the course should be practiced in the application of advanced statistical methods, should be able to interpret the results of a statistical analysis, and should be aware of limitations and possible sources of errors in the analysis. Final assessment: the course assessment will be based on a written exam held in the computer lab, that will involve the analysis of different data sets using the methods and models studied during the course. Attending students will be allowed to develop and discuss a short dissertation before the end of the course, and will be exempt from a part of the written exam.</p> <p>Part I: Introduction to data analysis and exploratory techniques - Data frames - Cluster analysis - Principal component analysis Part 2: Normal linear regression and its generalizations - Polynomial regression - Multiple regression - Logistic and multinomial regression - Beta regression - Poisson and negative binomial regression Part 3: Panel data analysis - Balanced and unbalanced panel, micro and macro panel - Modeling the level of the dependent variable - Modeling change of the dependent variable - Fixed effects and random effects models for categorical variables and continuous variables</p>			

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Indicative list of lectures:	
Short bibliography:	