SYLLABUS

Name of the course:	Statistics						
Teacher:	Stefano Bianchini						
University / organisation:	University of Torino						
Language of teaching:	English						
ECTS:	9						
Semester (S1, S2, S3 or S4):	☑ S1	☐ S2	☐ S3	☐ S4			
Teaching method(s):	☑ Lecture courses		☐ Flipped classroom				
	Other:						
Type(s) of evaluation:	☑ Sitting exam		☐ Written report				
	☐ Oral defence		☐ Group project				
	Other / comments:	The exam includes two parts: the first is a test with closed answers which, if positive, gives access to the second part, which entails the solution of a small case study. The second part is optional if you accept a low grade.					
Expected deadline(s) for the evaluation(s)	July						
Expected date of final results:	July						
Summary of the content:	The student is expected to acquire the knowledge of the traditional instruments of statistics and the ability of using such techniques for the construction of quantitative models used in the solution of economic problems.						
Indicative list of lectures:	- Probability: Conceptions of probability, probability of events, random variables and probability distributions, specific random variables - Statistical inference: the logic of probabilistic sampling. Sample statistics. Point estimate. Analogical approach to point estimation. Sample mean and variance, their distribution for finite samples and asymptotic distribution. Maximum likelihood estimators. Properties of the estimators. - Interval estimation: concept of confidence, confidence intervals, particular cases on the mean and variance - Hypothesis testing: null and alternative hypotheses, simple and compound hypotheses, parametric and non-parametric, first and second species errors. The concept of statistics test. The significance and power						

	of the test. Test on the mean and variance, on the difference between averages, independence tests. Likelihood ratio tests. The computational part of the course will be delivered using a personal computer with spreadsheet software.
Short bibliography (in no particular order):	• Bruce M. King, Patrick J. Rosopa, Edward W. Minium - Statistical Reasoning in the Behavioral Sciences - Sixth Edition; John Wiley & Sons, Inc. • Roxy Peck, Chris Olsen, Jay L. Devore - Introduction to Statistics and Data Analysis - fourth edition; Brooks & Cole • Roxy Peck, Jay L. Devore - Statistics The Exploration and Analysis of Data - sixth edition; Brooks & Cole • Robert R. Pagano - Understanding Statistics in the Behavioral Sciences - ninth edition; Wadsworth • David S. Moore, George P. Mccabe, Bruce A. Craig - Introduction to the practice of statistics - Sixth Edition; W. H. Freeman and Company, New York • Frederick J. Gravetter, Larry B. Wallnau - Essentials of Statistics for the Behavioral Sciences - 8th edition; Wadsworth • William Mendenhall, Robert J. Beaver, Barbara M. Beaver - Introduction to Probability and Statistics, 13th edition; Brooks&Cole • Morris H. DeGroot, Mark J. Schervish - Probability and Statistics - Fourth Edition; Addison-Wesley • David R. Anderson, Dennis J. Sweeney, Thomas A. Williams - Statistics For Business And Economics - 11th edition; South-Western