General Information	
Academic subject	**Research and data processing techniques**
Degree course	Pedagogical Sciences
Curriculum	
ECTS credits	
Compulsory attendance	No, but the attendance is deeply recommended
Language	Italian

Subject teacher	Name Surname	Mail address	SSD
	Claudia Marin	Claudia.marin@uniba.it	Secs-S/01

ECTS credits details			
Basic teaching activities	13/D1	SECS-S/01	6

Class schedule	
Period	I half year 2019/20
Year	I year
Type of class	Conventional

Time management	
Hours measured	1h= 60 min
In-class study hours	40
Out-of-class study hours	110

Academic calendar	
Class begins	10/7/2019
Class ends	01/31/2020

Syllabus	
Prerequisite requirements	There are no formal prerequisites, but it is strongly recommended to have studied topics of general mathematics.
Expected learning outcomes	The aim of the course is to provide students with the essential knowledge of the statistical methodologies and to familiarize them with the fundamental techniques of data collection and data processing and their immediate applicability. At the end of the course the student will be able to: • recognize the type and structure of the available data and identify the most appropriate analysis technique for both the univariate and the bivariate case; • acquire skills in critical analysis of the results obtained, contextualising them with reference to real problems. • apply to concrete cases and interpret the results of the main descriptive and inferential statistical analysis methods.
Contents	MONOVARIATE DESCRIPTIVE STATISTICS Frequency distributions, tables and graphs Average values and insights Variability Index numbers BIVARIATED DESCRIPTIVE STATISTICS Double entry tables Independence, connection and association Dependence and correlation Regression STATISTICAL INFERENCE TOOLS From description to inference

	Probability case and random variables Sampling and sampling error Estimates and estimators Confidence intervals Statistical tests
Course program	
Bibliography	Mecatti F. STATISTICA DI BASE. COME, QUANDO, PERCHÉ. McGraw Hill Education. 2015
Notes	The text presents an online platform with additional exercises and solutions.
Teaching methods	Lectures e periodic practice exercises
Assessment methods	The assessment methods used at the end of the course are a written exam that includes exercises on the statistical techniques learned during the course and the oral exam that includes theoretical questions aimed at verifying the right understanding of the studied concepts and their practical application.
Further information	