

# Syllabus

## *Course Description*

<b>Course Title</b>	Statistical and Demographic Analysis of Social Phenomena
<b>Course Code</b>	51119
<b>Course Title Additional</b>	
<b>Scientific-Disciplinary Sector</b>	STAT-03/B
<b>Language</b>	Italian
<b>Degree Course</b>	Bachelor in Social Work
<b>Other Degree Courses (Loaned)</b>	
<b>Lecturers</b>	dr. Evan Tedeschi, Evan.Tedeschi@unibz.it <a href="https://www.unibz.it/en/faculties/education/academic-staff/person/37256">https://www.unibz.it/en/faculties/education/academic-staff/person/37256</a>
<b>Teaching Assistant</b>	
<b>Semester</b>	Second semester
<b>Course Year/s</b>	1
<b>CP</b>	6
<b>Teaching Hours</b>	30
<b>Lab Hours</b>	10
<b>Individual Study Hours</b>	110
<b>Planned Office Hours</b>	18
<b>Contents Summary</b>	See the individual course modules
<b>Course Topics</b>	<p>During the course, the following topics will be covered:</p> <ul style="list-style-type: none"><li>• Introduction to statistical methodology and descriptive statistics.</li><li>• Statistical survey and creation of a questionnaire.</li><li>• Definition of variable, statistical unit, population, and sample.</li><li>• Statistical description of a group: from data collection to the data matrix.</li><li>• Frequency distribution of a variable and its graphical representation.</li><li>• Measures of central tendency and position.</li></ul>

	<ul style="list-style-type: none"> <li>• Measures of variability.</li> <li>• Analysis of the association between two variables: the contingency table.</li> <li>• Elements of demography.</li> </ul>
<b>Keywords</b>	Definition of variable; Simple and joint frequency distributions; Means; Variability; Definition of Association.
<b>Recommended Prerequisites</b>	Basic mathematics knowledge acquired during high school.
<b>Propaedeutic Courses</b>	
<b>Teaching Format</b>	The course consists of in-person 30 hours of lectures and 10 hours of lab sessions, during which the professor will present the various topics. The lecture content will be delivered using PowerPoint presentations, which will be made available to students on OLE. All sessions follow a mixed approach: traditional lecture-based teaching alternates with interactive learning moments, with proportions varying depending on the topic and the type of activity carried out. Typically, the interactive component will be more prominent during in-class exercises and lab sessions.
<b>Mandatory Attendance</b>	In accordance with the regulation
<b>Specific Educational Objectives and Learning Outcomes</b>	See the individual course modules
<b>Specific Educational Objectives and Learning Outcomes (additional info.)</b>	<p>The aim of the course is to ensure that students acquire a solid understanding of both the methodological and applied fundamentals of statistics, relevant to the statistical study of social phenomena. Students will develop the ability to identify and apply the appropriate statistical tools for describing individual phenomena or the relationships between multiple phenomena.</p> <p><b>Knowledge and Understanding</b>            Students will gain knowledge of and understand the fundamental concepts of descriptive statistics in order to produce data summaries that highlight the key features of the data.</p> <p><b>Applying Knowledge and Understanding</b>            Students will learn to apply the methodologies introduced during the course to socio-demographic data.</p> <p><b>Independent Judgment</b></p>

	<p>Students will develop strong independent judgment skills and learn to identify the most methodologically appropriate techniques to answer specific questions, based on empirical evidence provided by the data.</p> <p><b>Communication Skills</b> Students will learn to use technical statistical terminology appropriately and effectively, in order to clearly communicate the conclusions drawn from their data analyses.</p> <p><b>Learning Skills</b> A solid understanding of fundamental statistical concepts will enable students to independently continue their learning in this discipline.</p>
<b>Assessment</b>	<p>The course examination consists of two parts:</p> <ul style="list-style-type: none"><li>• A theoretical part, which will be assessed through a written test containing questions and exercises aimed at verifying both the knowledge and understanding of the course topics, as well as the ability to apply this knowledge to practical cases.</li><li>• A practical part, assessed through a lab test in which the student will be required to analyse a dataset, answer the given questions, and describe the results obtained.</li></ul>
<b>Evaluation Criteria</b>	<p>The final grade will be the weighted average of the written exam (5/6) and the lab assessment (1/6). Both parts must be passed in order to pass the exam.</p> <p>Additionally, two in-course (optional) assessments will be held during the semester. Passing both of these (one of which will include the lab part) will count as the final grade, which will be calculated as the weighted average of the two assessments, according to the criteria outlined above. If one of the two partial assessments is not passed, it may be retaken during the final exam.</p> <p>In any case, students may take the final exam if the grades from the in-course assessments are not considered satisfactory.</p> <ul style="list-style-type: none"><li>• The evaluation criteria for the written exam are: accuracy of the answers provided, appropriateness of comments in sections requiring personal interpretation, and knowledge of the methods</li></ul>

	<p>needed to solve the proposed exercises.</p> <ul style="list-style-type: none"> <li>• The evaluation criteria for the lab assessment are: knowledge of the software and techniques required to solve the proposed task, and the adequacy of the interpretation of the results obtained.</li> </ul>
<b>Required Readings</b>	M.K. Pelosi, T.M. Sandifer, P. Cerchiello, P. Giudici <i>Introduzione alla statistica</i> , McGraw Hill, 2009 seconda edizione (capitoli 0 - 4).
<b>Supplementary Readings</b>	P. Poli <i>EXCEL 2019. Formule e analisi dei dati</i> . Hoepli Informatica. A. Rosina e A. De Rose. Demografia. Egea. Milano. 2017.
<b>Further Information</b>	Lecture notes prepared by the teacher will also be provided.
<b>Sustainable Development Goals (SDGs)</b>	Quality education

## Course Module

<b>Course Constituent Title</b>	Statistical and Demographic Analysis of Social Phenomena
<b>Course Code</b>	51119A
<b>Scientific-Disciplinary Sector</b>	STAT-03/B
<b>Language</b>	Italian
<b>Lecturers</b>	dr. Evan Tedeschi, Evan.Tedeschi@unibz.it <a href="https://www.unibz.it/en/faculties/education/academic-staff/person/37256">https://www.unibz.it/en/faculties/education/academic-staff/person/37256</a>
<b>Teaching Assistant</b>	
<b>Semester</b>	Second semester
<b>CP</b>	5
<b>Responsible Lecturer</b>	
<b>Teaching Hours</b>	30
<b>Lab Hours</b>	0
<b>Individual Study Hours</b>	95
<b>Planned Office Hours</b>	15
<b>Contents Summary</b>	The course, which also includes a lab module, aims to provide the foundations of statistical and demographic reasoning, offering the tools to understand and analyze social phenomena using quantitative methods. The program includes an introduction to the

	<p>logic of statistics, the classification of variables, techniques for summarizing and comparing data, the analysis of relationships between variables, and the use of social and demographic indices and indicators. The course will also explore technical aspects related to the study of population, with reference to its structure, the events that affect it, and its dynamics.</p>
<b>Course Topics</b>	<p>During the course, the following topics will be covered:</p> <ul style="list-style-type: none"> <li>• Introduction to statistical methodology and descriptive statistics.</li> <li>• Statistical survey and creation of a questionnaire.</li> <li>• Definition of variable, statistical unit, population, and sample.</li> <li>• Statistical description of a group: from data collection to the data matrix.</li> <li>• Frequency distribution of a variable and its graphical representation.</li> <li>• Measures of central tendency and position.</li> <li>• Measures of variability.</li> <li>• Analysis of the association between two variables: the contingency table.</li> </ul>
<b>Teaching Format</b>	<p>The course consists of in-person 30 hours of lectures, during which the professor will present the various topics. The lecture content will be delivered using PowerPoint presentations, which will be made available to students on OLE.</p> <p>All sessions follow a mixed approach: traditional lecture-based teaching alternates with interactive learning moments, with proportions varying depending on the topic and the type of activity carried out. Typically, the interactive component will be more prominent during in-class exercises and lab sessions.</p>
<b>Required Readings</b>	<p>A. Rosina e A. De Rose. <i>Demografia</i>. Egea. Milano. 2017;</p> <p>M.K. Pelosi, T.M. Sandifer, P. Cerchiello, P. Giudici <i>Introduzione alla statistica</i>, McGraw Hill, 2009 seconda edizione (chapters 0 to 4).</p> <p>Lecture notes prepared by the teacher will also be provided.</p>
<b>Supplementary Readings</b>	<p>A. Rosina e A. De Rose. <i>Demografia</i>. Egea. Milano. 2017.</p>

## *Course Module*

<b>Course Constituent Title</b>	Statistical and Demographic Analysis of Social Phenomena (LAB)
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<b>Course Code</b>	51119B
<b>Scientific-Disciplinary Sector</b>	STAT-03/B
<b>Language</b>	Italian
<b>Lecturers</b>	dr. Evan Tedeschi, Evan.Tedeschi@unibz.it <a href="https://www.unibz.it/en/faculties/education/academic-staff/person/37256">https://www.unibz.it/en/faculties/education/academic-staff/person/37256</a>
<b>Teaching Assistant</b>	
<b>Semester</b>	Second semester
<b>CP</b>	1
<b>Responsible Lecturer</b>	
<b>Teaching Hours</b>	0
<b>Lab Hours</b>	10
<b>Individual Study Hours</b>	15
<b>Planned Office Hours</b>	13
<b>Contents Summary</b>	The lab module of the Quantitative Social Research course aims to provide a practical introduction to the analysis of social and demographic data using Excel. It will focus on the application of descriptive statistical techniques to the study of social and demographic phenomena, as covered in the theoretical module, with particular attention to the interpretation of results and their communication.
<b>Course Topics</b>	The topics covered in this part of the course, which includes the use of EXCEL, are: <ul style="list-style-type: none"> <li>- Setting up the data matrix.</li> <li>- Manipulating variables and cases: recoding, case selection, and separate analyses.</li> <li>- Univariate analysis: descriptive statistics, frequency distributions, and charts.</li> <li>- Bivariate analysis: cross-tabulations.</li> </ul>
<b>Teaching Format</b>	The lessons include hands-on computer use by the students, who will be introduced to the use of EXCEL. Only a few hours will be delivered through traditional lectures, while the majority will involve students working in small groups to analyse datasets provided by the professor.

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<b>Required Readings</b>	Lecture notes prepared by the teacher will be provided.
<b>Supplementary Readings</b>	P. Poli <i>EXCEL 2019. Formule e analisi dei dati</i> . Hoepli Informatica.