

## Syllabus Course description

<b>Course title:</b>	<b>Quantitative Analysis of Social Phenomena and Population Dynamics</b>
<b>Course year:</b>	1 <sup>st</sup>
<b>Semester :</b>	2 <sup>nd</sup>
<b>Course code</b>	51071
<b>Degree</b>	BA in Social Work
<b>Scientific sector</b>	SECS-S/05
<b>Lecturers</b>	Loner Enzo E-mail: <a href="mailto:enzo.loner@unibz.it">enzo.loner@unibz.it</a> <a href="#">Pagina web personale su unibz.it</a>  Poggio Teresio E-mail: <a href="mailto:teresio.poggio@unibz.it">teresio.poggio@unibz.it</a> <a href="#">Pagina web personale su unibz.it</a>
<b>Module</b>	no
<b>Lecturers other modules</b>	/
<b>Credits</b>	6
<b>Total lecturing/lab hours</b>	25 hours (Quantitative analysis of social phenomena, EN, Poggio) 20 ore (Analisi quantitativa dei fenomeni sociali e delle dinamiche di popolazione, IT, Loner)
<b>Total office hours</b>	18
<b>Office hours</b>	Please refer to the monthly schedule on the course's OLE and Reserve Collection. The instructors are usually available also after class. Additional meetings by appointment, in case of special needs (please contact the lecturer by email). Non-attending students are specifically encouraged to take advantage of office hours.
<b>Attendance</b>	According to the regulations
<b>Teaching language</b>	As established by the Faculty, the course is offered partially in English (25 hours, Dr. Poggio) and partially in Italian (20 hours, Dr. Loner).
<b>Propaedeutic course</b>	None
<b>Course Description</b>	The course aims at providing students with the theoretical and practical background for the use of statistics in the study of social phenomena. It also aims at introducing the fundamentals of demography, the science dedicated to the study of population dynamics. The course will discuss the rationales for quantification in these fields, the main related study designs (experiment, survey, structured observation) and the main sources for existing data of possible interest to students in social work (official statistics, data archives, register data). The main methodological issues in the development of a questionnaire and in the setting up of a social survey will be introduced. A more detailed discussion will focus on the fundamentals of statistics and on its proper use in order to summarize social phenomena (so-called descriptive

	<p>statistics), and to describe relationships between two variables. The course does not only consider theoretical and methodological issues; it also focuses on the technical skills and on the how-tos (MS Excel) related to the management, analysis and presentation of quantitative data; to the computation of the statistics of interest (e.g. means, frequency distribution, contingency tables); to the design of appropriate graphs.</p>
<p><b>Specific educational objectives</b></p>	<p>Type of course: fundamental course in the following scientific areas: social statistics, methods in social research.</p> <p>The course aims at offering students the methodological fundamentals and the basic skills of quantitative methods in social research. It also aims to promote a sound use (theory and methods) of descriptive statistics in order to summarize social phenomena and their relationships. Together with theoretical and methodological lectures, the course laboratory aims at developing students' skills in applying, in practice, what has been learnt during the course.</p> <p>Finally, the course will also provide a first introduction to demography, its main concepts and applications.</p>
<p><b>List of topics covered</b></p>	<p>1. QUANTITATIVE ANALYSIS (English):</p> <ul style="list-style-type: none"> <li>- The quantitative research strategy in social research; its ontological, epistemological and methodological assumptions; opportunities and limitations from quantitative methods;</li> <li>- Study designs in the measurement of social phenomena: experiments, surveys and structured observation;</li> <li>- Existing data as valuable resources: register data, official statistics, data archives and data from previous surveys;</li> <li>- The basics of survey methodology, with a special focus on measurement: operationalization of theoretical concepts; questionnaire design;</li> <li>- Basic concepts in descriptive statistics and variable measurement levels;</li> <li>- Data representation (micro-level data matrix, aggregated data matrix) and the fundamentals of data management (recoding, computing derived variables; taking care of own data, data documentation and versioning);</li> <li>- The study of the distribution of categorical variables (frequency distribution) and their graphical representation;</li> <li>- The study of the distribution of continuous variables (measures of central tendency and dispersion) and their graphical representation;</li> <li>- The study of relationships between two variables, and their graphical representation;</li> <li>- A few hints on statistical control (controlling for spurious, indirect and intervening relationships) and on the usefulness of considering more than two variables in statistical analysis;</li> <li>- A few hints on the logic of statistical inference and on the use of the latter for (a) hypothesis-testing; (b) inferring characters of the population of interest, from data collected for a smaller sample of this population.</li> </ul> <p>2. ANALISI QUANTITATIVA DEI FENOMENI SOCIALI E DELLE DINAMICHE DI POPOLAZIONE (Italiano):</p> <p>Utilizzo di Microsoft Excel per:</p> <ul style="list-style-type: none"> <li>- Data management (selezione di subset,</li> </ul>

	<p>ordinamento, ecc.)</p> <ul style="list-style-type: none"> <li>- Esplorazione dei dati in base domande di ricerca e alle proprietà delle variabili</li> <li>- Semplici frequenze, tabelle di contingenza e confronto delle medie</li> <li>- Test di ipotesi</li> <li>- Rappresentazione dei dati in tabelle</li> <li>- Rappresentazione grafica dei risultati</li> </ul>
<p><b>Teaching format:</b></p>	<p>The course's lectures sum up to 45 hours. During these lectures, the instructor will introduce the different themes. Lectures are partitioned as follows:</p> <ul style="list-style-type: none"> <li>- 25 hours (English) dedicated to introducing quantitative methods for the analysis of social phenomena;</li> <li>- 5 hours (Italian) dedicated to introducing demography;</li> <li>- 15 hours (Italian) dedicated to training in laboratory sessions, where knowledge and skills acquired in the two previous parts will be applied, in practice.</li> </ul> <p>Course materials for each lecture – lab sessions included – will be available on the course digital learning platform (OLE).</p> <p>Classes will include traditional lectures, exercises –including home assignments – and their discussion, practical sessions in order to apply what learnt during the course, in MS Excel.</p>
<p><b>Learning outcomes:</b></p>	<p><b>Knowledge and understanding</b> of quantitative methods in the social sciences; of the principles and methodology in the quantification of social phenomena; of basic concepts in descriptive statistics, applied in these fields, and of elementary concepts in demography; of the use of software in quantitative data analysis.</p> <p><b>Applying knowledge and understanding</b> in terms of:  (a) general awareness of how statistical data are constructed in the social sciences; (b) being able to apply statistical knowledge from the course on dataset of interest, in order to describe its variables and provide a basic but appropriate analysis.</p> <p><b>Making judgments</b> in terms of ability to frame own work towards a summary and statistical analysis, as a function of own goals (research questions, description and summary of given phenomena, exploring relationships between variables); and by selecting appropriate – according to statistics – descriptive statistics and graphs for considered data; with methodological rigor, accuracy and precision.</p> <p><b>Communication skills</b> as the ability to summarize data and own findings in a clear, concise and methodologically appropriate way. Use of statistical and demographic lexicon.</p> <p><b>Learning skills:</b> Ability to find data sources of interest, and related documentation; capacity to outline – in basic terms – one possible data collection activity, serving own academic and professional goals; ability to use information from the course for further knowledge development and training.</p>

<p><b>Assessment:</b></p>	<p>Assessment takes places in three steps:</p> <p>1. <u>Assignment in questionnaire design, in English (1/3 of the final marks):</u> This is a personal or small group (2 students) assignment, to be developed at home. It consists in focusing on a simple research question, in selecting the most relevant related concepts and in working towards the measurement of the latter using a questionnaire. In practice, students have to write 1-2 pages of questions in a questionnaire, starting from their objective (their research question) and using the methodological skills acquired during the course.  <u>The research question (ad the related concepts to be measured) has to be agreed with the instructor no later than one month before the exam.</u> More details and deadlines for submission will be communicated when the course starts.</p> <p>2. <u>Development of a personal project in data analysis, in Italian (1/3 of the final marks):</u> mini-essay (3-6 pages). It consists in the written presentation of an original synthesys and simple data analysis, based on existing data. <u>The topic (and the dataset to be used) should be agreed with the instructor no later than one month before the exam.</u> Students should apply in this exercise the methods and skills acquired during the course. The deadline for delivering this assignment is 5 days before the exam. The MS Excel working file used for the analysis should be annexed, too.</p> <p>3. <u>Integrated final written test - in classroom, partially in English and partially in Italian (1/3 of the final marks), covering the two parts of the course:</u> a set of closed-ended questions testing knowledge and understanding of the course topics.</p> <p>Final exam marks will be computed as the weighted mean of marks attained in the three assesment steps discussed above.  <u>Please note: in order to pass the exam, students must attain a positive evaluation in each of the three assesment steps,</u> irrespective of the overall average marks attained.</p> <p>OPTIONAL ASSESSMENT ROUTE FOR ATTENDING STUDENTS:  Students attending 60% of the 45 lecture hours, at least, may choose to be assessed according to an "attending students" assessment route, where:</p> <ul style="list-style-type: none"> <li>- the final written test counts for 20% of the final marks, only;</li> <li>- the remaining 20% of the final marks is to be assessed on the basis of active participation to the course: contributing to the discussion in class on the course topics; active participation to practical sessions; discussion of short readings / exercise to be prepared at home);</li> </ul> <p>Remaining assessment criteria discussed above for all students – the assignment in questionnaire design and the individual data analysis projects – count for 30% and 30% of the final marks, respectively.</p>
<p><b>Evaluation criteria and criteria for awarding marks:</b></p>	<p>Marks for each of the assessment steps above are awarded in the range from 0/30 to 30/30. A positive evaluation means 18/30 or higher marks.  The overall finale exam marks are awarded in the same</p>

	<p>range. They are computed as the weighted average of marks attained in the single assessment steps. In any case, students would pass the exam only under condition of a positive evaluation in all the three steps of the assessment procedure.</p> <p>Assessment criteria are as follows:</p> <p><u>All assessment steps:</u></p> <ul style="list-style-type: none"> <li>- Knowledge of course contents, their understanding and ability to apply them, in practice;</li> </ul> <p><u>Step 1 (assignment on questionnaire design):</u></p> <ul style="list-style-type: none"> <li>- Correct approach used (with reference to research questions and methodology);</li> <li>- Adequacy of methodological choices related to the selection of questions and their wording;</li> </ul> <p><u>Step 2 (assignment in data analysis):</u></p> <ul style="list-style-type: none"> <li>- Correct approach used (with reference to research questions and statistical theory);</li> <li>- Adequacy of methodological and statistical choices and of comments related to statistics and graphs computed.</li> <li>- Correctness, methodological rigor and precision in the management of data used for own statistical work, in MS Excel;</li> <li>- Consistency between knowledge shown in this assignment and knowledge shown in the final written test (step 3);</li> <li>- Ability to clearly communicate statistical information presented in the mini essay, with reference to both their substantive and their methodological dimensions (social sciences and statistics, respectively);</li> </ul> <p><u>Step 3 (final written test):</u></p> <ul style="list-style-type: none"> <li>- Correctness of answers provider;</li> <li>- Adequacy of comments in possible open-ended questions requiring personal judgment;</li> </ul> <p><u>Participation (attending students' assessment route):</u></p> <ul style="list-style-type: none"> <li>- Participation to discussion during classes, on the course topics;</li> <li>- Preparatory work at home, towards discussion in class, related to some optional materials (short readings, exercises).</li> </ul>
<p><b>Required readings:</b></p>	<ol style="list-style-type: none"> <li>1. Clark, T., Foster, L. Sloan, L. and Bryman, A. (2021). Bryman's Social Research Methods, 6<sup>th</sup> edition. Oxford University Press. The following chapters:       <ol style="list-style-type: none"> <li>1. The nature and process of social research;</li> <li>2. Social research strategies: Quantitative research and qualitative research;</li> <li>3. Research designs</li> <li>4. Planning a research project and formulating research questions;</li> <li>7. The nature of quantitative research;</li> <li>9. Structured interview;</li> <li>10. Self-completion questionnaires;</li> <li>11. Asking questions;</li> <li>15. Quantitative data analysis (pp. 315-338 only).</li> </ol> </li> <li>2. Rosina, A. e De Rose, A. Demografia. Egea. Milano. 2017 (Selected chapters to be communicated by the instructor)</li> </ol>

	<p>3. Poli, P. (2019) EXCEL 2019. Formule e analisi dei dati. Hoepli.</p> <p>Further bibliographical and web resources on the use of MS Excel in statistical analysis may be communicated during the course.</p>
<p><b>Supplementary readings:</b></p>	<p>Attending students are kindly invited to read (optional activity) the following short paper before the course starts:</p> <p>Rosenhan, D. L. (1973), "On being sane in insane places". In Science, vol. 179, pp. 250-258.</p> <p>Reprints of this paper are available in English (<a href="#">click here</a> for pdf), Italian (<a href="#">click here</a> for Library record) and German (<a href="#">click here</a> for Library record). Its contents will be used to discuss the rationale for qualitative and quantitative research strategies, their ontological, epistemological and methodological assumptions; and practical considerations calling for one or the other strategy, as well.</p> <p>Other supplementary (optional) readings will be suggested during the course.</p>