

COURSE OUTLINE

(1) GENERAL

SCHOOL	SOCIAL SCIENCES		
ACADEMIC UNIT	SOCIOLOGY		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	650	SEMESTER	E (Winter)
COURSE TITLE	QUANTITATIVE METHODS IN SOCIAL SCIENCES		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
Lectures		3	6
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	COMPULSORY ELECTIVE / SKILLS DEVELOPMENT / SPECIAL BACKGROUND		
PREREQUISITE COURSES:	NO PREREQUISITES		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)	https://eclass.aegean.gr/courses/SOC315/		

(2) LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i>
<p>Sociology, more than any other social science, is distinguished by the wide range of quantitative and qualitative methodologies it employs. This course introduces students to quantitative methods and their application in the analysis of real-world social phenomena. The diversity of available methods equips social scientists with powerful tools for interpreting complex societal issues.</p> <p>The course aims to familiarize students with the principles of research design and the practical use of quantitative techniques. By exploring the foundations of research design and engaging with debates on the validity and utility of different methodologies, students will learn to critically evaluate social research and develop the methodological skills necessary for their own future projects.</p> <p>After an initial week covering key foundational concepts, the course focuses on how to design and carry out a research project, including data collection and analysis. Topics include measurement, hypothesis testing, sampling strategies, statistical generalization, correlation vs. causation, experimental designs, and comparative-historical approaches.</p> <p>Students will also gain hands-on experience in formulating research questions and designing questionnaires, with particular attention to the</p>

ethical dimensions of conducting research.

Course Objectives

1. Develop proficiency in quantitative research methodologies
2. Understand and apply fundamental principles of research design, including crafting research questions
3. Master sampling techniques, sample size determination, variable classification, and the use of descriptive and inferential statistics through hands-on practice with SPSS
4. Apply appropriate quantitative methods aligned with specific research questions
5. Integrate research findings and effectively communicate results
6. Acquire practical skills in using the SPSS statistical software package

Learning Outcomes

Upon successful completion of this course, students will be able to:

1. explain the significance of quantitative research within Social Work
2. articulate the ontological and epistemological underpinnings of quantitative research methods
3. design quantitative research studies using sound methodological principles
4. select and implement suitable sampling strategies
5. employ effective methods and tools for quantitative data collection
6. conduct statistical analyses on quantitative data sets
7. formulate precise, researchable questions
8. recognize and address ethical issues in quantitative research
9. collaborate efficiently within research teams
10. demonstrate competence in designing and executing research projects

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>
<i>Decision-making</i>	<i>Respect for the natural environment</i>
<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>
<i>Team work</i>	<i>Criticism and self-criticism</i>
<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>
<i>Working in an interdisciplinary environment</i>	<i>.....</i>
<i>Production of new research ideas</i>	<i>Others...</i>
	<i>.....</i>

Search for, analysis and synthesis of data and information, with the use of the necessary technology
Adapting to new situations
Decision-making
Working independently
Team work
Working in an interdisciplinary environment
Production of free, creative and inductive thinking

(3) SYLLABUS

1st Lecture Introduction to Quantitative Methods

1. Overview of quantitative research methods

2. Selecting an appropriate research approach
3. Research paradigms: Constructivism, Positivism, Post-Positivism
4. Comparing quantitative and qualitative research designs

2nd Lecture Foundations of Research Design

1. Identifying and framing the research problem
2. Concepts, definitions, and theoretical frameworks
3. The role of theory in quantitative and mixed methods research
4. Crafting purpose statements in quantitative and mixed designs

3rd Lecture Literature Review and Field Exploration

1. Conducting an effective literature review
2. Integrating literature into research design

4th Lecture Theoretical and Analytical Frameworks

1. Formulating research questions for quantitative and mixed methods
2. Hypothesis development: Null, directional, and non-directional hypotheses

5th Lecture Data Collection Tools - Questionnaires and Interviews

1. Designing effective questionnaires
2. Structuring interviews for quantitative studies
3. Ethical considerations in data collection

6th Lecture Survey Research and Instrumentation

1. Survey design and implementation
2. Measurement instruments
3. Defining the population, sampling units, and target sample

7th Lecture Variables and Experimental Design

1. Identifying and operationalizing study variables
2. Introduction to experimental procedures and research controls

8th Lecture Sampling Techniques

1. Probability and non-probability sampling methods
2. Determining appropriate sample sizes

9th Lecture Data Management and Software

1. Coding variables and preparing datasets
2. Introduction to SPSS for data entry and management

10th Lecture Data Analysis I - Descriptive and Inferential Techniques

1. Computing variables and scale construction
2. Introduction to hypothesis testing

11th Lecture Data Analysis II - Validity and Reliability

1. Understanding and assessing measurement validity
2. Establishing reliability in quantitative research

12th Lecture Data Analysis III - Qualitative Data

1. The role of the researcher in qualitative inquiry
2. Data collection procedures in qualitative contexts
3. Techniques for recording and analyzing qualitative data

13th Lecture Mixed Methods Research

1. Overview of mixed methods research designs
2. Sequential explanatory strategies
3. Interpreting and presenting mixed methods findings

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face													
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<p>The university's electronic platform will be used to communicate with students, provide educational material, support training and practice, and deliver feedback.</p> <p>In parallel, statistical software (such as SPSS and possibly R) as well as spreadsheets (e.g., Excel) will be utilized.</p>													
TEACHING METHODS <i>The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i>	<table border="1"> <thead> <tr> <th style="text-align: center;"><i>Activity</i></th> <th style="text-align: center;"><i>Semester workload</i></th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">39</td> </tr> <tr> <td>Guided applications by students</td> <td style="text-align: center;">35</td> </tr> <tr> <td>laboratory practice</td> <td style="text-align: center;">50</td> </tr> <tr> <td>Independent study</td> <td style="text-align: center;">56</td> </tr> <tr> <td>Course total</td> <td style="text-align: center;">180 (ECTS 6)</td> </tr> </tbody> </table>		<i>Activity</i>	<i>Semester workload</i>	Lectures	39	Guided applications by students	35	laboratory practice	50	Independent study	56	Course total	180 (ECTS 6)
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STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i>	<ol style="list-style-type: none"> 1. Participation in coursework – 20% 2. Final written examination – 80% <p>The final exam will consist of multiple-choice questions, short-answer questions, and problem-solving exercises.</p> <p>Students with learning difficulties will receive appropriate support in accordance with legal requirements, academic standards, and the specific nature of the course.</p> <p>Individual academic support will be available by appointment or during designated office hours.</p>													
<i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i>														
<i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>														

(5) ATTACHED BIBLIOGRAPHY

Supplementary Readings

1. Babbie, E. (2011) Εισαγωγή στην κοινωνική έρευνα, Κριτική, Αθήνα.
2. Bryman, A. (2017) Μέθοδοι κοινωνικής έρευνας, Gutenberg, Αθήνα.
3. Field, A. (2016), Η διερεύνηση της στατιστικής με τη χρήση του SPSS της IBM, 1η εκδ., Προπομπός