

**COURSE SYLLABUS: QUANTITATIVE AND QUALITATIVE METHODS IN
SOCIAL RESEARCH
(10 ECTS)**

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Aim, Results of Mastering the Discipline and Prerequisites

The goal and objectives of the course «Quantitative Methods in Social Research» is to teach students how to analyse data using both qualitative and quantitative methods. Understanding statistics is essential to understand research in the social, management and behavioural sciences, the course introduces to the students the notions of the basic statistical tools, how to calculate the basics of statistics and how to evaluate them. This is an elementary course and students without strong mathematical knowledge will have no difficulties to follow it.

As a result, students at the end of the course should:

Know:

- Types and particular properties of quantitative and qualitative data and methodologies
- The methods of collecting data in research and data gathering methods
- The basic methods of descriptive and inferential statistics
- Graphical and tabular descriptive techniques
- Sample distribution and probability theory
- Estimating population parameters and chi-square test
- linear regression and correlation analysis
- Ethics involved when embarking on a research journey

Be able to:

- The ability to work with information: find, evaluate and use information from various sources, necessary to complete scientific and professional tasks.
- The ability to construct relevant research questions and hypotheses in research
- The ability to describe any data sets using a few numbers (descriptive statistics), and then reach statistically justifiable conclusions about those data sets.
- Ability to define and reconstruct the system of connections between different factors in the sphere of public policy and human rights.
- To select the appropriate model / method of statistical analysis for a given problem.
- To advance own knowledge in the area of research methods.

Have:

- confidence in their ability to tackle basic applied and non-applied statistics problems
- the fundamental knowledge needed to learn more in-depth statistical theory

The basics of this discipline should be used in the following courses and activities:

- Master thesis writing
- Articles/Paper writing
- Applied social research
- All other program-related courses

The course is strongly related and complementary to other compulsory courses provided in the first year (e.g. Research Seminar) and sets a crucial prerequisite for later courses and research projects as well as for the master thesis.

LEARNING OUTCOMES

1. The course gives students an important foundation to develop and conduct their own research as well as to evaluate the research of others
2. Students should be familiar with ethical issues in educational research, including those issues that arise in using quantitative and qualitative research
3. Students at the end of this course will have the basic prerequisite to developing a concept
4. Independent research work

5. It will also assist students to understand and evaluate methodological aspects of published research that they encounter
6. Students will be furnished with both qualitative and quantitative methods; hence they can decide which of the aforementioned methods to choose from.
7. Students should be able to identify the overall process of designing a research study from its inception to its report/thesis
8. Students should know the steps in the process of quantitative data collection.
9. Students should be able to distinguish between a population and a sample.
10. Students should know the various types of quantitative sampling and which ones present the most rigorous approach to use.

COURSE CONTENTS

SESSION 1: The Nature of Scientific Knowledge

This session consists of lecture and the chapter encompasses the nature and form of human knowledge, the difference between the three contexts or words in which knowledge functions namely: the world of everyday life (lay knowledge), the world of science (scientific knowledge) and the world of metascience (the world of reflection on scientific practice).

SESSION 2: An Introduction to Research Methodology

This session consists of the Lecture and the Seminar. The chapters encompass research scope and definition, the objectives of research and the motivation for research.

SESSION 3: Business/Social Research Approaches

This session explores the nature of the relationship between theory and research. Does theory guide research (known as a deductive approach) or is theory an outcome of research (known as an inductive research)? Epistemology issues, ontological issues, reliability, replication and validity. How can they be used as criteria for assessing the quality of social/business research?

SESSION 4: The Significance of Research

This session consists of the significance of research, the importance of knowing how research is done, the criteria of good research and problem encounters during research. The session comprises both lecture and a seminar.

SESSION 5: Research Design and Problem Formulation

This chapter encompasses the logic of research, what is designing of social research? Developing a typology of research questions, examining the structure of research problem, show how a proper problem formulation incorporates both the research purpose of a study and clear identification of the unit of analysis.

SESSION 6: Types of Research Design

This session encompasses the various type of research design vis-à-vis experiments, surveys, qualitative studies, participatory action research, evaluation research and unobtrusive research. The session includes both a lecture and a seminar.

SESSION 7: The logic of Sampling

This chapter consist of sampling history, types of sampling, non-probability sampling, the logic of probability sampling, sampling concept and terminology, population and sampling frames, and the types of sampling design. The session consists of Lecture and the Seminar.

SESSION 8: Elementary Analysis

This segment encompasses distribution, central tendency and dispersion. The session will be guided by a lecture and a seminar. Student will apply basic commands of SPPSS software for computing and calculating basic statistics.

SESSION 9: Getting started: Planning a Research Project.

This session consists both a lecture and seminar and students will get to know about what is expected of them in research, thinking about your research area, using your supervisor, managing time and resources, avoiding plagiarism, referencing your work and questions for review.

SESSION 10: Formulating a Research Proposal

This session consists of the Lecture and the Seminar. This chapter explores the nature of research, the principles of research for social sciences, formulating a proposal, research problem, research purpose, research question, research tasks and qualitative research design.

SESSION 11: Writing up Research

This session encompasses lecture and seminar. The focus will be on writing up research putting into considerations some factors such as start early, be persuasive, avoiding disablist language(s) and getting feedback.

SECTION 12: Literature Review

This session encompasses a lecture and a seminar. The focus will be on literature review and process involved in reviewing literatures.

SESSION 13: Data Collection

The first segment encompasses the Lecture and the Seminar. The Lecture will introduce the basic concepts of quantitative and qualitative methods in social research and lay out the course plan and requirements from student participation. The focus of section one includes but not limited to data collection and types of data, During the Seminar, we will find out different types of qualitative and quantitative data collection methods and available data sources.

SECTION 14: Interview and Focus Group

This section encompasses the introduction and structure interview, accuracy and ease of data processing, interviews, other approaches to structure interviews, focus group and its introduction and finally conducting focus groups- how many groups and the size of group. The first segment encompasses the Lecture and the Seminar

SESSION 15: Data Gathering Methods

This session consists of the Lecture and the Seminar. During the Lecture, we will learn basic sampling techniques vis-à-vis statistical sampling, simple random sampling, stratified random sampling, cluster sampling and systematic random sampling. Probability and Non Probability samplings. Samplings for social surveys, structured observation, interviews and participant observation During the Seminar, we will emphasise more on the basic sampling plans.

SESSION 16: Quantitative Method

This section focusses on quantitative research and explores the main features. During the lecture, we will learn in details qualitative methodology and its purpose. Students will learn during the seminar and apply basic commands of SPSS software for statistical computing and calculating basic statistics.

SESSION 17: Qualitative Method

This section focusses on qualitative methodology in research and it also explores the main features of qualitative research method. The session includes a lecture and a seminar. Students will learn during the seminar and apply some basic commands and basic statistics

SESSION 18: Probability Concepts

This session consists of the Lecture and the Seminar. The Lecture will introduce the basic concepts of the Probability theory vis-à-vis probability distribution and probability rules. During the Seminar, we will practice in probabilities distribution which is essential in the development of statistical inference.

SESSION 19: Graphical and Tabular Descriptive Techniques

This section consists of a Lecture and a Seminar. The lecture focuses on graphs, charts and tables describing data. We will learn frequency distribution and histograms, bar charts and pie charts, and the ability to interpret frequency tables.

SESSION 20: Sample Distribution

This section consists of a Lecture and Seminar. The sample distribution, mean, median and mode, the population mean and variance forms part of the lecture while we will practice the calculation in the seminar.

SESSION 21: Ethics in Research

This session consists of lecture only. The focus encompasses ethical principles and other legal consideration if need be.

SECTION 22: Quantifying Data

This session is made up of a lecture and a seminar with includes the introduction of quantifying data, computers in social research: enter computers and microcomputers.

SESSION 23: Linear Regression and Correlation

This session consists of the Lecture and the Seminar. During the Lecture, we will learn linear regression and correlation analysis. During the Seminar, we will learn practice in correlation and regression analysis

SECTION 24: Estimating population parameters

The session consists of a Lecture and Seminar. The focus in the lecture encompasses concepts of estimation, estimation for the population mean. During the seminar, we will practice the estimations for the means.

GRADING

The final grade is composed of a cumulative grade and the exam. Four Homework assignments make up 40 percent of the cumulative grade. Two quizzes make up 20 percent of the cumulative grade. The cumulative grade makes up 60 percent of the final grade. Course project makes up 40 percent of the final grade.

The cumulative and final grades are composed according to the following formulas (O stands for “grade”).

$$O_{\text{cumulative}} = 0.6 * O_{\text{homeworks}} + 0.4 * O_{\text{quizzes}}$$

$$O_{\text{final}} = 0.6 * O_{\text{cumulative}} + 0.4 * O_{\text{project}}$$

If the final grade is non-integer, it is rounded according to algebraic rules. If has a half (.5) at the end, we are rounding upward.

GRADING TOOLS

Homework Assignments

There will be four homework assignments with exercises.

- Students are allowed to work on homework assignments individually or in groups of two.
- Homework outputs will be handed in a printed version at the beginning of a predefined class or sent by e-mail before the class (unless agreed differently). If the students work in pairs.

The role of each student needs to be described and both students need to sign it.

Quizzes

There will be two short quiz to tests and to check students understanding of studied material.

COURSE PROJECT

There will be no in-class exam. Course Project plays the role of Exam. Students should analyse an individual particular data set; to derive it is properties, to provide statistical description and conclusions.

SOURCES

Main Literature

1. Kothari, C.R. Research Methodology Methods and Techniques. New Age International Limited Publishers, ISBN (13): 9788122424881.
2. Bryman, *et. al.* Research Methodology Business and Management Contexts. Oxford University Press, Southern Africa. Oxford, 2011- ISBN9780199076130.
3. Gerald, K. Statistics for Management and Economics, Seventh Edition, Thomson Brooks/cole, ISBN0-495-013390

Additional Literature

1. Wonnacott, T. H. Introductory statistics for business and economics / Т. H. Wonnacott, R. J. Wonnacott. – 4th ed. – New York: John Wiley & Sons, 1990. – 815 с. – (Wiley series in probability and mathematical statistics) . - 55 экз. уч.ф.(к). – На англ. яз. - ISBN 0-471-61517-X.
2. Сигел, Э. Ф. Практическая бизнес - статистика / Э. Ф. Сигел; Пер. с англ. А. И. Мороза, и др.; Под ред. А. П. Горбачика. – 4-е изд. – М.; СПб.; Киев: Вильямс, 2004. – 1051 с. - 50 экз. уч.ф. Кирп. - ISBN 5-84590-306-8.
3. Brians C. L., Empirical political analysis: quantitative and qualitative research methods / С. L. Brians, L. Willnat, J. B. Manheim, R. C. Rich. – 8th ed. – Harlow: Longman, 2011. – 428 с. – На англ. яз. - ISBN 978-0-205-79121-7.
4. Newbold, P. Statistics for business and economics / P. Newbold, W. L. Carlson, B. M. Thorne. – 8th ed. – Boston [etc.]: Pearson, 2013. – 792 с. – На англ. яз. - ISBN 978-0-273-76706-0

Material and technical support

Classrooms for lectures on the discipline provide for the use and demonstration of thematic illustrations corresponding to the program of the discipline, consisting of:

- PC with Internet access (operating system, office software, antivirus software);
- Multimedia projector with remote control.