



Course syllabus

Faculty of Social Sciences
Department of Political Science

4XA111 Kvantitativa metoder i samhällsvetenskaperna, 7,5
högskolepoäng

Quantitative methods in Social Science, 7.5 credits

Main field of study

Peace and Development Studies
Sport Science
Education
Social Work
Political Science
Sociology

Subject

Other Interdisciplinary Studies

Level

Second cycle

Progression

A1N

Date of Ratification

Approved 2025-03-03.

The course syllabus is valid from autumn semester 2025.

Prerequisites

General entry requirements for second-cycle studies and specific entry requirements: minimum 90 credits in Peace and Development Studies, Sport Science, Pedagogy, Social Work, Sociology or Political Science, or the equivalent.

Objectives

Upon completing the course, students will be able to:

- demonstrate the ability to design an advanced social science project that establishes causal inferences.
- apply statistical research methods to address diverse questions in the social sciences, with a focus on multivariate regression and other advanced techniques.
- integrate knowledge of empirical applications to produce methodologically sound and impactful analyses.
- orally and in writing, clearly articulate arguments and conclusions derived from social research employing quantitative methods.
- confidently manage data and apply a variety of statistical techniques to diverse data sources using statistical software.
- design and rigorously test causal models derived from theoretical frameworks.
- effectively present, visualize, interpret, and analyze empirical results obtained through statistical methodologies.
- plan and execute a focused study to address a causal inference problem, employing appropriate statistical methods and presenting findings in a research paper.
- produce scholarly work adhering to academic standards, including accurate citation and proper referencing.
- articulate complex ideas and research findings clearly and effectively in both oral and written English.

Content

The course provides students with a thorough understanding of causal inference methods commonly used in social science research. It covers the entire research process with an emphasis on quantitative methods, from problem definition and research design to data acquisition, analysis, and presentation of results.

The course is divided into three main components:

1. **Theory and Research Design for Causal Inference:** Focuses on the theoretical foundations of causal inference and the principles of effective research design.
2. **Quantitative Methods and Statistical Analysis:** Introduces basic statistical techniques, with a strong focus on linear regression and multivariate analysis. This section includes lectures, tutorials using statistical software to apply methods for causal inference.
3. **Independent Research Paper:** Students apply their knowledge to design a research project, perform statistical analysis, and present results in a written paper focused on a self-chosen research problem.

Type of Instruction

Teaching is conducted in the form of lectures, teacher-led supervised tutorial and workshops. Language of instruction: English

Examination

The course is assessed with the grades A, B, C, D, E or F.

The course is examined through an individual written project, followed by an oral examination. During the oral examination, students will present their work in a seminar format.

Grade A represents the highest grade on the scale, and the subsequent grades follow in

descending order, where grade E is the lowest grade that qualifies as a Pass. A grade of F means that the student's performance is assessed as Fail. Fx is not a grade and is only used when a student is permitted to supplement his/her examination.

Resit examination is offered in accordance with Linnaeus University's Local regulations for courses and examination at the first- and second-cycle levels. In the event that a student with a disability is entitled to special study support, the examiner will decide on adapted or alternative examination arrangements.

Course Evaluation

A course evaluation should be conducted during the course or in connection with its conclusion. The results and analysis of the completed course evaluation should be promptly communicated to students who have completed the course. Students participating in the next course instance should be informed of the results of the previous course evaluation and any improvements that have been made, no later than at the start of the course.

Overlap

The course cannot be included in a degree along with the following course/courses of which the content fully, or partly, corresponds to the content of this course:

4XA100 Methods in Social Science (15 credits) with 7.5 credits

4XA110 Quantitative methods in Social Science, 7,5 credits.

Required Reading and Additional Study Material

Aneshensel, Carol (2013). *Theory-Based Data Analysis for the Social Sciences*. London: Sage Publications Ltd (2nd edition), (472 pages). ISBN: 9781412994354.

Babbie, Earl, Halley, Fred S, Wagner, William E III & Zaino, Jeanne (Latest edition). *Adventures in Social Research – Data Analysis Using IBM SPSS Statistics*. Sage Publications, Thousand Oaks, CA, (521 pages).

Pallant, Julie (Latest edition). *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS*. Maidenhead, Berkshire, England: McGraw Hill, (378 pages). (LNU library).

Stockemer, Daniel (2019). *Quantitative methods for the social sciences: A practical introduction with examples in SPSS and Stata*. Springer, (181 pages). ISBN: 9783319991184.

Course literature in Swedish

Edling, Christofer & Hedström, Peter (Latest edition). *Kvantitativametoder: Grundläggande Analysetoder för Samhälls- och Beteendevetare*. Lund: Studentlitteratur, (250 pages).