Syllabus

for course at advanced level

Quantitative Methods in the Social Sciences I
Kvantitativ samhällsvetenskaplig metod 1

7.5 Higher Education Credits
7.5 ECTS credits

Course code:	SO7032
Valid from:	Autumn 2023
Date of approval:	2016-10-25
Changed:	2022-10-25
Department	Department of Sociology
Main field:	Sociology
Specialisation:	A1N - Second cycle, has only first-cycle course/s as entry requirements

Decision

The syllabus is approved by the Board of the Department of Sociology as of October 25 2022.

Prerequisites and special admittance requirements

Bachelor´s degree, English 6

Course structure

Examination code	Name	Higher Education Credits
1M16	Quantitative Methods in the Social Sciences I	7.5

Course content

Regression analysis is a basic method for a social scientist and a good understanding of regression analysis is a prerequisite to learn other quantitative methods. This course presupposes an elementary understanding of quantitative methods. The objective of the course is to provide a solid understanding of the use of regression analysis within the social sciences. The course emphazises an understanding of the uses and limitation of regression analyses. The relevance of the assumptions of this method is brought up, and also the practical work in using regression analysis to explore social science issues. The course focuses on the OLS method (Ordinary Least Squares) where continuous dependent variables are analyzed, but brings also up analyses of binary outcome varaibles, such as logistic regressions. The methods will be illuminated in their two foremost areas of use, to estimate effects of variables, and to explain variations. The course starts with a discussion of bivariate regression (analysis of the association between two variables), and continues with multiple regression, discussions of confounding and indirect effects. Also discussed within the course are variable tranformations, cathegoric variables, and interaction variables, as well as the problem of outliers, heteroscedasticity, and multicollinearity.

Learning outcomes

Education

The teaching is performed as lectures and computer excercises where the statistical software Stata is used.

Forms of examination

The examination consists of individual home-assignments, one peer-review
assignment, one group-work assignment (formative assessment), and a final take-home exam (summative

assessment).

The individual home-assignments, the peer-review assignment, and the group-work assignment are graded Pass or Fail. All of them need to be graded pass to receive a final grade.The final take-home exam consists of two parts. The first part consists of a critical evaluation of an assigned study. The following aspects are evaluated:

(i) discussion of the appropriateness of regression analysis for the research
problem addressed (1),

(ii) assessment of the data, variables, and their manipulation (2), and the
model specification (3), and

(iii) evaluation of the interpretation of the results (4) and their potential
limitations (5).

The second part consists of a small independent study using regression analysis. The
following aspects are evaluated:

(iv) argumentation for why regression analysis is appropriate for the research
question (6),

(v) data description and variable choice (7), and manipulation of the data and
the variables (8), and model specification (9),

(vi) assessment of outliers (10), functional form and heteroscedasticity (11),
multicollinearity (12), and interactions (13),

(vii) clear (14) and appropriate (15) presentation of the results of the regression
analysis,

(viii) interpretation of the parameters (16) and other model results (17) in terms
of statistical and substantive significance(18),

(ix) discussion of results in light of the research question (19) and the
limitations of the analysis (20),

(x) Appropriate Stata-syntax examples and "do-files" that are clear and easy
to follow (21).

The final grade is based on the 21 dimensions specified above, each of which is graded between Good (2 points), Pass (1 point), and Fail (0 points). In addition, on-
time submission of complete individual home-assignments and on-time submission of
a complete peer review assignment also give 2 points each. The total number of points a student can receive is 46.

The final course grade is given as follows:

A (Excellent): 42-46 points
B (Very good): 37-41 points
C (Good): 32-36 points
D (Satisfactory): 27-31 points
E (Sufficient): 23-26 points
Fx (Insufficient): Fail one to four of the graded dimensions specified above
F (Fail): Fail more than five of the graded dimensions specified above

Examination takes place during the course and there is a final exam at the end of the course. All course work must be submitted no later than one week after completion of the course to be examined during the current course. If a student fails to meet this deadline or leaves at least one task with significant errors that must be resubmitted, examination will take place in connection with the course being given the next semester or at the reexamination.

Students with grade Fx or F at an exam are entitled to take another exam as long as the course is provided in order to obtain grade E at least. A student with E or higher is not entitled to another examination to raise his/her grade. Students who received grade Fx or F on exams twice from the same examiner can request to be evaluated by another examiner. Such request should be sent to the Director of Studies.

Plagiarism, cheating and unauthorized cooperation
It is the responsibility of the student to be familiar with the rules for examination. Detailed information is available at Stockholm University's website www.su.se/regelboken. Teachers are obliged to report suspicion of cheating and plagiarism to the Director of Studies and the Disciplinary Board. An example of plagiarism is to formally or almost verbatim copy a text (even a single sentence) without indicating where this comes from. This also applies to texts you have previously written (self-plagiarism). Study groups are encouraged, but when it comes to individual course work, students must take care to submit independent work and not unauthorized cooperation.

Limitations

No admission to this course is possible for anyone who has passed the course SO7030 Quantitative Methods

in the Social Sciences 7.5 credits.

Required reading

Current literature list is available no later than two months before the start of the course.