



Introduction to Quantitative Methods in Educational Research Course Schedule autumn 2025

Course teachers

Shu-Nu Chang Rundgren shu-nu.chang-rundgren@edu.su.se

Staffan Nilsson staffan.nilsson@edu.su.se

Course administrator

Erika Södersten forskarutbildning@edu.su.se

The course aim and design

The purpose of the course is for PhD candidates who have not taken any previous quantitative and statistics courses to develop their knowledge and skills of quantitative methods and statistical analyses in educational research. The course is composed of lectures, seminars and workshops. During the course, doctoral students will develop (1) their over-view on how to conduct research via quantitative methods and the related design in educational research, (2) their knowledge and skills of basic statistical concepts and procedures, including measurement, distributions, descriptive statistics, and tests of significance, (3) their ability to critically evaluate the statistical analyses identified in literature, and (4) their skill on developing a survey and analyzing the data via SPSS program. The maximum number of course participants is limited to 10. PhD candidates from the Department of Education are given priority in this course.

Literature:

- Clark, T., Foster, L., Sloan, L., & Bryman, A. (eds.) (2021). *Bryman's Social Research Methods (6th ed)*. Oxford University Press.
- Field, A. (2018). *Discovering Statistics Using IBM SPSS Statistics (5th ed)*. SAGE publications.

Course content and schedule

Date	Themes	Teacher
September 02 Tuesday 13-16	Lecture: • Introduction on the nature of quantitative research and its applications • Validity and Reliability *Literature: Bryman, A. Part 2 (Chapters 7 - 15)	Shu-Nu
September 16 Tuesday 13-16	Lecture: Epistemological foundation: Introduction to basic statistical concepts and procedures - sampling, data levels of measurement, distributions *Literature: Field, chapters 1-2, 5-10, 12	Staffan
September 23 Tuesday 13-16	Workshop on developing a questionnaire and using Survey & Report	Shu-Nu
October 07 Tuesday 13-16	Lecture: Descriptive statistics (central tendency, dispersion, and bivariate correlations), simple regression, and tests of significance (parametric and non-parametric tests). *Literature: Field, chapters 1-2, 5-10, 12	Staffan
October 14 Tuesday 13-16	Workshop on SPSS: Conducting descriptive statistics and tests of significance. *Literature: Field, chapter 4	Staffan
November 04 Tuesday 13-16	Seminar: Critical evaluation of empirical articles: Students need to present articles in which quantitative methods are used. Instruction of the task will be provided before the seminar.	Shu-Nu & Staffan
December 02 Tuesday 13-16	Seminar: Students need to submit a synopsis of the course paper one week before, and work on opposition at the seminar. Instruction of the task will be provided before the seminar.	Shu-Nu & Staffan
January 16, 2026 Friday 23:59	Students need to submit the final version of course papers for examination due 16 January 23:59 via Athena course site.	Shu-Nu & Staffan