

Quantitative Methods for Human Geographers (7.5 ECTS)

October-November 2026

Course organizers

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Course description

The course offers an introduction to quantitative research methods in human geography to doctoral students with no or little prior knowledge of quantitative methods and/or statistical analysis. The aim of the course is for students to develop an understanding of the basic concepts employed in quantitative research in social sciences, in general, and in human geography, in particular, as well as to develop the ability to critically assess quantitative research conducted by others.

The course is jointly arranged by human geographers from Lund University and Umeå University. The course is taught in English.

Learning outcomes

Upon the completion of the course, the students shall:

Knowledge and understanding

- demonstrate an understanding of the basic concepts and fundamental principles guiding the use of quantitative methods;

Competence and skills

- demonstrate the ability to apply basic practical skills with regard to the performance of statistical analysis using statistical software (Jamovi);

Judgement and approach

- develop the ability to critically evaluate quantitative research as it is presented in scientific journals and/or reports.

Course design

The course is organized around lectures, computer labs and discussion sessions/seminars over two meetings in Lund and Umeå. Lectures provide a conceptual introduction to the topics discussed throughout the course. Computer labs allow students to practice applied skills in statistical analysis. Discussion sessions and seminars are interactive moments that allow students to build a more contextual understanding of applicability and limitations of quantitative methods with respect to human geographical research.

Assessment and grading

The course is graded on a Pass-Fail scale.

To pass the course, students are expected to actively participate in arranged sessions and submit a final paper which consists of two parts: the first presenting results of applied analysis based on tools introduced in the course, and the second providing a critical assessment of published research using quantitative methods in the field close to students own projects. The examination also includes an online session where students present results of their applied analysis.

Course events

First meeting (Oct 13 – Oct 15, 2026) in Lund, Sweden

The meeting in Lund provides the general introduction into the quantitative methods. In particular, we will discuss topics such as epistemological assumptions behind quantitative research, positioning of quantitative methods in the methods toolbox of a researcher in social sciences, in general, and human geography, in particular. We will focus on what *responsible* quantitative research means, and more broadly what ethical considerations should be taken into account when engaging with quantitative methods. This will be followed by the discussion session which will focus on opportunities, challenges, and limitations of quantitative research in the field of human geography.

On the more practical side, the students will be introduced to the process of quantitative data collection, idea of inference from a sample to a population, as well as various tools of univariate data analysis (descriptive statistics, graphical summary of data, etc.). This will be done with a combination of lectures and practical computer labs.

At the end of the first meeting, students are given instructions for the final assignment and asked to begin working on it in-between the meetings.

Second meeting (Nov 4 – Nov 6, 2026) in Umeå, Sweden

The meeting in Umeå will focus on the analysis of relationships, starting with bivariate analysis (analysis of relationships between two variables) and extending it to the multivariate case when more than two variables are involved. This will be organized via lectures and practical computer labs.

During the lectures we will also discuss basic assumptions behind statistical models, ways of selecting variables and model specifications, as well as securing the quality of the estimations. During the lab time we will practice these skills using open access statistical tools and datasets.

The second meeting will also have a discussion session which will introduce students to how one evaluates quantitative research conducted by others.

Online examination (Nov 30 – Dec 4, 2026)

Course literature

Course book

Aneshensel, Carol S. (2013) Theory-based data analysis for the social sciences. (2nd ed.). London: SAGE.

The course books will be used as the basic reading for introduction in quantitative research as well as all practice-oriented sessions throughout the course.

Articles

A selection of peer-reviewed articles that apply quantitative methods within the field of human geography (ca 300 pages). These papers will be communicated to accepted students at least two months before the course start.

Course fee

There is no course fee, but participants will have to cover all other costs (travel, accommodation, food, course literature etc.) by own arrangements.

Application process:

The course is dimensioned for 10-15 students. There are no prerequisites with respect to prior knowledge. Students with no or little experience in quantitative methods will be prioritized.

Applications are to be submitted to Mikhail Martynovich (mikhail.martynovich@keg.lu.se) by May 15, 2026, at the latest. Notification on acceptance will be sent by June 1, 2026.

Application must include 1) name and academic affiliation, 2) name of supervisor(s), year of enrolment in the PhD studies, and expected year of defence, and 3) discipline of PhD (formal) and 4) a short description of the topic of the PhD research project.