

The Quantitative Research Process - from idea to contribution - 7.5 credits

The course is organised as part of Halmstad University's doctoral program in Innovation Sciences.

Course Objectives

The overall aim of this course is that the PhD student shall acquire advanced knowledge and skills in the quantitative research process and obtain a capacity to produce a scientific article based on quantitative data. After completing the course, the student shall be able to:

Knowledge and understanding

- Explain the basic principles, concepts and terms in the quantitative methodology.
- Express understanding of quantitative research and various types of research design.
- Express a fundamental understanding of multivariate analysis

Skills and Ability

- Plan, introduce and conduct a study with a quantitative design.
- Implement, interpret and assess different multivariate quantitative analysis
- Develop the layout and present quantitative analysis for a publication. In accordance with the instructions of scientific journals

Judgement and approach

- Assess and evaluate quantitative analyzes in scientific literature
- Identify an ethical and scientific approach to research consistent with quantitative analysis in the formulation of research problem, research questions and hypotheses related to the design, data and methodology.

Primary Contents

The course includes a discussion on the research process and the interconnection between the research process, the report structure and journal outlets in scholarly studies. Important parts are development of questionnaires, collecting of data and analysis of data with multivariate methods (e. g correlation analysis, factor analysis, regression analysis and Structural Equation Modelling (SEM)). Analysis are done in the computer program SPSS. The course includes elements introducing and practicing the above aspects of the quantitative methodology. It involves lectures, seminars, and tutorials that deal with the quantitative research process from the idea to the scientific contributions.

Schedule

Our goal is that this course will be set on campus. However, if the “Corona-restrictions” will not make that possible, the course will be delivered on distance with digital tools.

1st and 2nd DAYS: September 24-25 – kl 10-17

Describing a counter-intuitive view of the research process.

Describing the interconnection between the research process, the report structure and journal outlets in scholarly studies.

A workshop on 1st round of questionnaire development from theory to measurable items.

A workshop on 2nd round questionnaire development from theory to measurable items.

Instructions for joint empirical study including data collection and coding.

3rd and 4th DAYS: October 27-28 - kl 10-17

Preparations of data file, check for errors and control. Univariate analysis of items.

An interactive workshop on the logic of correlation, regression and factor analysis (including validity and reliability) and hands-on exercises using SPSS based on data from joint study.

A workshop on Structural Equation Modelling (SEM) including hands-on exercises using AMOS based on data from joint empirical study.

Article structure and examples.

5th DAY: December 2 – kl 10-17

An interactive seminar to report assignment on Structural Equation Modelling (SEM) using AMOS based on data from joint study.

Teachers

Professor, Svante Andersson, Halmstad University, Sweden - svante.andersson@hh.se
<https://scholar.google.com/citations?user=vb1eNrEAAAAJ&hl=en&oi=ao>

Professor, Göran Svensson, Kristiania University College, Norway - svegor@kristiania.no
Guest professor, Halmstad University, Sweden
<https://scholar.google.com/citations?hl=en&user=-CG1b78AAAAJ>