



COURSE SYLLABUS

Quantitative Methods for HCI, 7.5 credits

Kvantitativa metoder för HCI, 7,5 högskolepoäng

Course Code: TKHR23	Education Cycle: Second-cycle level
Confirmed by: Dean Mar 1, 2023	Disciplinary domain: Technology
Revised by: Director of Education May 15, 2023	Subject group: DT1
Valid From: Aug 1, 2023	Specialised in: A1N
Version: 4	Main field of study: Informatics

Intended Learning Outcomes (ILO)

After a successful course, the student shall:

Knowledge and understanding

- demonstrate comprehension of quantitative studies by appropriate statistical terminology
- display knowledge of the concepts of exploratory vs. confirmatory factor analysis
- display knowledge of important concepts of multiple regression analysis

Skills and abilities

- demonstrate the ability to explain the potentials and limitations of statistical methods for analysis of multivariate data
- demonstrate the ability to identify which kind of multivariate statistical analysis is appropriate for a specific problem
- demonstrate the ability to conduct multivariate statistical analyses with an appropriate statistical software
- demonstrate the ability to assess the goodness-of-fit of a multivariate model

Judgement and approach

- demonstrate the ability to assess the general usefulness/weaknesses of the statistical analyses treated in the course

Contents

This course is an introductory course in quantitative methods available to master students. The goal of the course is to provide the master students with basic understanding of the role and potential of quantitative research methods, basic ability to understand and evaluate the merits and shortcomings of other researchers' (quantitative) studies, basic ability to apply certain quantitative techniques in their own research.

The course includes the following elements:

- Descriptive statistics + graphical analysis
- Sampling and survey design

- Factor analysis
- Regression analysis
- Approaches how to work with incomplete data

Type of instruction

Lectures and assignments.

The teaching is conducted in English.

Prerequisites

The applicant must hold the minimum of a bachelor's degree (i.e the equivalent of 180 ECTS credits at an accredited university) with at least 90 credits in Informatics, Computer Engineering, Computer Science, or equivalent. Proof of English proficiency is required.

Examination and grades

The course is graded 5,4,3 or Fail.

Registration of examination:

Name of the Test	Value	Grading
Examination ¹	5 credits	5/4/3/U
Assignment	2.5 credits	U/G

¹ Determines the final grade of the course, which is issued only when all course units have been passed.

Course literature

The literature list for the course will be provided 8 weeks before the course starts.

Hair Jr., J. F., Babin, B.J. & Anderson, R.E, Black, W.C., Multivariate Data Analysis: Cengage, Latest edition