



## Course syllabus – Third-cycle Course

### Quantitative Research Methods II, 7,5 credits

Kvantitativa forskningsmetoder II, 7,5 hp

Course code	FHVV005
Established date	2016-05-23
Established by	School of Health, Care and Social Welfare
Valid from	Fall semester 2018
Main fields of study	Care Science, Public Health Science, Physiotherapy, Social Work and Work Life Studies
Area of education	Health and Welfare
Level of the course	Third cycle
Language	English
Grading System	Two-grade scale
Change date	2018-02-20, 2020-05-27, 2022-05-23

#### Specific requirements

A completed bachelor's degree from an institution of higher education of three years or more, equivalent to 180 credits in one of the following subject areas: Public Health Science, Caring Science with Specialization in Nursing, Nursing Science, Medical Science, Physiotherapy, Social Work, Sociology, Psychology, or the equivalent. In addition, Swedish B/Swedish 3 and English B/English 6 are required. For courses given entirely in English exemption is made from the requirement in Swedish B/Swedish3.

#### Objectives

The objective of the course is for students to acquire further in-depth knowledge of quantitative designs and methods, including multivariate statistical methods of analysis that are of relevance to the field of health and welfare. Students are also expected to further develop their critical approach to scientific work.

## Learning outcomes

Upon completion of the course, students are expected to be able to:

1. Evaluate and argue for different research designs
2. Evaluate basic properties of measuring instruments for different dimensions of health and welfare
3. Evaluate and argue for the choice of multivariate methods of analysis
4. Apply a selection of multivariate methods of analysis
5. Interpret and reflect upon the results of multivariate methods of analysis
6. Review, assess and apply combinations of qualitative and quantitative methodological approaches (mixed method)
7. Evaluate and argue for a chosen research design, measuring instrument and analysis in relation to one's own research project

## Course content

- Different types of experimental and non-experimental research designs
- Psychometric properties of measuring instruments, such as different forms of reliability and validity, sensitivity and specificity are studied
- Multivariate methods of analysis, such as principal component analysis, factor analysis, MANOVA, and logistic regression
- Different ways to combine qualitative and quantitative methods, including their respective strengths and weaknesses

## Tuition

Teaching and learning take place in the form of lectures, seminars and/or exercises. The purpose of these teaching methods is for the students to practice independent and active searches for knowledge, cooperation, discussion, argumentation and critical reflection. In the course, and educational web-based platform is used for the sharing of course material, communication and discussion.

## Examination

ASSIGN 1 Hand-in assignment, 1,5 credits, individual assignment, regarding learning outcomes 4-5, grades Fail (U) or Pass (G).

ASSIGN 2 Hand-in assignment, 6 credits, individual assignment, regarding learning outcomes 1-7, grades Fail (U) or Pass (G).

Possible re-examinations: 5

**Marks/grades**

Pass (G) or Fail (U).

In this course, the general rules and guidelines on deception and disturbance at Mälardalen University are applied. For more information see [mdu.se](http://mdu.se), and *Deception and Disturbance*.

**Reading List**

For information, please contact the responsible department