



DEPARTMENT OF NEUROBIOLOGY, CARE SCIENCES AND SOCIETY

H1F2664 Introduction to Modern Test Theory and Test/Survey Methodology, 4 credits (hec)

Introduktion till modern test-teori och analys av kliniska tester och enkäter, 4
högskolepoäng

Third-cycle level / Forskarnivå

Approval

This syllabus is approved by the The Committee for Doctoral Education on 2023-11-02, and is valid from Spring semester 2024.

Responsible department

Department of Neurobiology, Care Sciences and Society, Faculty of Medicine

Prerequisite courses, or equivalent

No prerequisite courses, or equivalent, demanded for this course.

Purpose & Intended learning outcomes

Purpose

The aim of the course is to deepen the students' knowledge in systematic methods for quantitative data gathering and their applications within health care sciences. The focus of the offered teaching modules is to provide the participants with a deeper understanding of the concepts and principles that are used as a basis for choices in data gathering and analysis.

Intended learning outcomes

The student will after completion of the course:

- Be able to analyse, judge and choose appropriate methods for quantitative data gathering using clinical tests/surveys
- Be able to analyse, judge and choose appropriate methods for analysis and interpretation of data from clinical tests/surveys
- Be able to critically reflect and discuss issues in relation to data gathering and analysis using clinical tests/surveys (e.g., theoretical concepts and operationalization, construction of tests,

aspects of validity, implementation)

- Be able to analyse and discuss questions in relation to the use of clinical tests/surveys in clinical health care sciences.

Course content

The content of the course is primarily based on aspects related to systematic quantitative data gathering processes.

The course introduces:

- The measurement process and the different aspects included in this process
- Modern test theory and current definitions of concepts
- Different quantitative data gathering methods
- Approaches for construction, application, analysis, and evaluation of clinical tests/questionnaires

The course content is individually adjusted for examining a specific aspect of data gathering processes (a clinical test/questionnaire/survey) that is chosen by the student and related to his/her own research project. This aspect is presented by the student during the first day of the course and will guide the individual learning processes.

Forms of teaching and learning

The pedagogic framing of the course is centred around the student's own research project.

The contents of the course are introduced in lectures and clinical applications. The students are then applying the processes/methods learned in workshops and group work with supervision. The outcomes are then presented and discussed in seminar forms.

The student is finally applying the course content on an individually chosen aspect of quantitative data gathering processes in his/her own research project.

Language of instruction

The course is given in English.

Grading scale

Pass (G) /Fail (U)

Compulsory components & forms of assessment

Compulsory components

Seminars are mandatory. A student will be able to compensate absence with written assignments.

Forms of assessment

The examination consist of a written paper based on the individually chosen aspect of quantitative data gathering processes in the student's own research project. The quality of the paper is judged according to the leaning outcomes in relation to specific given criteria in the course.

The paper is also presented in a seminar.

Course literature

Joint Committe on Standards for Educational and Psychological Testing of the American Educational Research Association, the American Psychological Association and the National Council on Measurement in Education (1999). Standards for Educational and Psychological Testing. Washington DC: American Educational Research Association.

Wilson, M. (2005). Constructing measures: an Item Response Modeling Approach. NJ: Mahwah. Lawrence Erlbaum Associates, Inc. Publishers.

StatSoft, Inc. (2002). Electronic Statistics Textbook. Tulsa, OK: StatSoft. Webbadress: <http://www.statsoft.com/textbook/stathome.html>

Trochim, W. M. K (2002) The Research Methods Knowledge Base: Measurement. Webbadress: <http://www.socialresearchmethods.net/kb/measure.htm>

Spector, P. E. (1992). Summated Rating Scale Construction: An introduction. Beverly Hills and London, Sage Publications, Inc.