Course syllabus for

Measurement instruments in health care science - validity and reliability and clinical applicability, 15 credits

Mätinstrument inom vårdvetenskap - validitet och reliabilitet samt klinisk användbarhet, 15 hp
This course has been cancelled, for further information see Transitional provisions in the last version of the syllabus.
Please note that the course syllabus is available in the following versions:
Autumn2011 , Autumn2012 , Autumn2014

Course code	2QA180
Course name	Measurement instruments in health care science - validity and reliability and clinical applicability
Credits	15 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Clinical Medical Science
Level	Second cycle, has only first-cycle course/s as entry requirements
Grading scale	Pass, Fail
Department	Department of Neurobiology, Care Sciences and Society
Decided by	Styrelsen för utbildning
Decision date	2011-04-05
Revised by	Styrelsen för utbildning
Last revision	2012-04-13
Course syllabus valid from	Autumn 2012

Specific entry requirements

A Bachelor's degree within health care or sports and training. Or a professional qualification of at least 180 credits within one of these fields including at least 15 credits in scientific theory and method and/or degree project, or a Bachelor of Science in Social Work. English and Swedish language skills equivalent to English A and Swedish B at Swedish upper secondary school are also required.

Objectives

The aim of the course is that the student should have acquired a research-ethical attitude about measurement instruments within caring science to be able to identify, evaluate and use measurement

instruments, independently, for different patient categories in clinical work. Furthermore, the aim is to acquire the ability and skills required to be able to develop measurement instruments through validation and reliability testing.

The student should on completion of the course independently be able to
1. explain the measurement process concerning different variables with various types of measurement instruments and data levels;
2. explain central concepts within test theory such as psychometrics, validity and reliability;
3. critically appraise scientific articles about validity and reliability of measurement instruments;
4. plan a study design and carry out a smaller study with the aim to study reliability or validity;
5. evaluate statistical methods for the analysis of validity and reliability of measurement instruments, carry out statistical analyses and evaluate the results;
6. suggest procedures for adaptation of measurement instruments to other patient group/context;
7. reflect on ethical aspects concerning measurement instruments;
8. reflect on measurement processes and measurement instruments together with other professions to strengthen the interprofessional understanding and communication.

Content

The course consists of two parts.

Test theory, 7.5 hp Part 1 contains:

- Classical and modern test theory about development and evaluation of measurement instruments
- Central concepts such as psychometrics, validity, reliability, variable, data level
- Translation and adaptation of instruments to new cultures or client groups
- Critical appraisal of scientific method articles about reliability and validity

Analysis of measurement instrument, 7.5 hp Part 2 contains:

- Study design to study psychometric properties of measurement instrument.
- Statistical methods for evaluation of psychometric properties of measurement instruments.

Teaching methods

The course is organised as a modified distance education with the web-based teaching platform Ping Pong as a basis, why access to computer is required. Individual work therefore takes place continuously during the whole course. In virtual discussion forums, the students will in groups discuss study assignments and give one another feedback. Course meetings for 1-2 days on the course location campus at Huddinge will be organised once a month. These meetings consist of lectures alternated with work in groups and compulsory seminars in interprofessional groups where assignments are presented and discussed. Communication with the teachers takes place continuously in Ping Pong and during the course meetings.

Examination

Part 1: Written review, including appraisal, of articles about the psychometric properties of measurement instruments within an optional field. Presentation and discussion with opponent in seminars.

Part 2: Written report of collected data or from database containing aim, design, relevant statistical analysis, results and interpretation related to central concepts in the course. Presentation and discussion with opponent in seminars.

In case of absence from an examination seminar a complementary assignment is agreed on with the responsible teacher.

Student who has not passed after regular examination session has the right to participate at further five examination sessions. If the student has carried out six failed examinations/tests no more examination session will be given. Examination session to which the student has registered but not participated in will not be counted as an examination session.

Transitional provisions

Examination will be provided during a time of one year after a possible close-down of the course. Examination can be according to an earlier literature list during a time of one year after the date when renewal of the literature list was made.

Other directives

Language of instruction: Swedish.

Course evaluation is made during the course, and at completion of the course with KI's computer-based course questionnaire, in accordance with the guidelines established by the Board of Higher Education.

Literature and other teaching aids

Streiner, David L.; Norman, Geoffrey R.

Health measurement scales : a practical guide to their development and use

4. ed. : Oxford : Oxford University Press, 2008 - xvii, 431 s.
ISBN:978-0-19-923188-1 (pbk.) £27.95 LIBRIS-ID:11197910
Library search

Kimberlin, Carole L; Winterstein, Almut G

Validity and reliability of measurement instruments used in research

2008
URL: http://www.ajhp.org/
Ingår i:
American journal of health-system pharmacyTM AJHP. : official journal of the American Society of health-system pharmacists

Bethesda, MD : 1995-
ISSN:1079-2082 LIBRIS-ID:4090863
65 (2008) :23, s. 2276-2284

Standards for educational and psychological testing

Washington, DC : American Educational Research Association, c1999 - ix, 194 p.
ISBN:0-935302-25-5 LIBRIS-ID:6806808
Library search

DePoy, Elizabeth; Gitlin, Laura N.

Introduction to research : understanding and applying multiple strategies

3. ed. : St. Louis : Elsevier Mosby, cop. 2005 - xix, 346 s.
ISBN:0-323-02853-5 LIBRIS-ID:9991923
Library search

Altman, Douglas D

Practical statistics for Medical Research

London : Chapman & Hall/CRC, 1992 - 611 pp

ISBN:0412276305
Library search

McDowell, Ian
Measuring health : a guide to rating scales and questionnaires

3. ed. : New York : Oxford University Press, 2006 - 748 s.
ISBN:0-19-516567-5 (cloth : alk. paper) LIBRIS-ID:10106244
Library search

Norman, Geoffrey R.; Streiner, David L
Biostatistics : the bare essentials

3. ed. : Hamilton : B.C. Decker, 2008 - xi, 393 s.
ISBN:1-55009-347-9 LIBRIS-ID:10734740
Library search

Brace, Nicola.; Kemp, Richard; Snelgar, Rosemary.
SPSS for psychologists

4th ed. : Basingstoke : Palgrave Macmillan, 2009. - xi, 454 s.
ISBN:978-0-230-59459-3 (pbk.) LIBRIS-ID:11490159
Library search