

**Quantitative Methods in Information Systems Research, 7.5 credits***Kvantitativa metoder inom informatikforskning, 7,5 hp*

<b>Course Code/Codes</b>	20KMI15
<b>Subject Area</b>	Informatics
<b>School/equivalent</b>	Örebro University School of Business
<b>Valid from</b>	2014-06-01
<b>Approved</b>	2014-04-07
<b>Revised</b>	
<b>Approved by</b>	Head of School
<b>Translation to English, date and signature</b>	2015-10-19 JGY

## 1 Course content

The course deals with research problems, measured data, statistical methods, statistical description and analysis, from a social science perspective. The course covers how a research question is formulated and operationalised to a statistical survey design, and how it can be implemented in the form of a statistical survey. Upon completion of the course the research student will be able to use, and evaluate the use of, statistical methods in the social sciences. The course includes the use of tools for statistical analysis and presentation.

## 2 Outcomes

### 2.1 The course in relation to the doctoral programme

The course shall primarily refer to the following intended learning outcomes for third-cycle courses and study programmes as described in the Higher Education Ordinance, i.e. the doctoral student shall demonstrate:

#### *Knowledge and understanding*

- familiarity with research methodology in general (part of outcome 2)
- familiarity with the methods of the specific field of research in particular (part of outcome 2)

#### *Competence and skills*

- the ability to identify and formulate issues with scholarly precision critically, autonomously and creatively (part of outcome 4)
- the ability to plan and use appropriate methods to undertake research and other qualified tasks within predetermined time frames (part of outcome 4)

The intended learning outcomes are listed in the same order as in the general syllabus for the programme.

## 2.2 Intended course learning outcomes

To obtain a passing grade, the doctoral student shall demonstrate:

- 1) sufficient in-depth and specific knowledge of the use of quantitative methods, to understand and take part in discussions on methodology, such as those implemented in the leading informatics journals.
- 2) knowledge of quantitative research from a social science perspective.
- 3) knowledge about how research problems, measured data and statistical methods affect the choice of statistical description and analysis.
- 4) knowledge of the possibilities and limitations of statistical methods for problem solving.
- 5) ability to conduct quantitative studies in informatics.
- 6) ability to evaluate published qualitative research from a methodological perspective.
- 7) ability to assess how different qualitative methods can be used within a doctoral project.

## 3 Reading list and other teaching material

The following course readings and teaching material will be used on the course:

### Required Reading:

Oates, Briony J (2006). *Researching Information Systems and Computing*. SAGE, 324 pp, ISBN/ISSN: 1-4129-0223-1.

Svensson, Elisabeth (2001). Guidelines to Statistical Evaluation of Data from Rating Scales and Questionnaires. *J Rehab Med*, (33), pp. 47-48.

Campbell, Michael J & Thomas D V Swinscow (2002) *Statistics at square one*. London: BMJ Books, pp. 158, ISBN/ISSN: 0-7279-1552-5.

## 4 Teaching formats

Teaching on the course takes the following format:

- a) Lectures
- b) Seminars (required)

## 5 Examination

The course is assessed through an examination consisting of the components listed below. The individual components are not graded separately but together they provide the basis for assessment and grading.

- Discussion seminars: oral discussions about research methods and research quality
- Written essay and presentation at the concluding seminar.
- Opposition on the written essay at the concluding seminar

*For examinations consisting of several examination components, the following applies: If during the course it is concluded that a doctoral student is unable to complete a certain examination*

component, the examiner may set a substitute assignment provided that circumstances do not reasonably allow for the course component to be completed at a later date during the run of the course.

## 6 Grades

Examinations on third-cycle courses and study programmes are to be assessed according to a two-grade scale with either of the grades 'fail' or 'pass' (local regulations).

The grade shall be determined by a teacher specifically nominated by the higher education institution (the examiner) (Higher Education Ordinance).

To obtain a passing grade on examinations included in the course, the doctoral student is required to demonstrate that he/she attains the intended course learning outcomes as described in section 2.2. Alternatively, if the course consists of multiple examinations generating credit, the doctoral student is required to demonstrate that he/she attains the outcomes that the examination in question refers to in accordance with section 5.

A student who has failed an examination is entitled to a retake.

If an examination consists of several examination components, and a student fails an examination component, the examiner may, as an alternative to a retake, set a make-up assignment with regard to the examination component in question.

A doctoral student who has failed an examination twice for a specific course or course element is entitled, upon his/her request, to have another examiner appointed to determine the grade.

## 7 Admission to the course

### 7.1 Admission requirements

To gain access to the course and complete the examinations included in the course, the applicant must be admitted to a doctoral programme at Örebro University.

### 7.2 Selection

Selection between applicants who have been admitted to doctoral programmes at Örebro University and who otherwise meet the admission requirements as listed above is made according to the following order of precedence:

- 1) Applicants from informatics
- 2) Applicants from the Research School in Technology-Mediated Knowledge Processes
- 3) Applicants from the School of Business
- 4) Applicants admitted to research study programmes at Örebro University.

If no other selection criteria are specified in this section, priority shall be given to applicants with a lower number of course credits left before the award of their degree over applicants with a higher number of remaining course credits. Should two or more students have equal number of credits, selection will be done through the drawing of lots. This also applies within any selection groups listed unless otherwise stated.

### **7.3 Other applicants than doctoral students admitted at Örebro University**

Other applicants than doctoral students admitted at Örebro University may be given access to the course on the grounds of provisions for and/or agreements regarding contracted courses, joint degrees, national graduate schools or cooperation in other respects with other universities.

Any decisions on what such other applicants may be given access to the course are made separately and on the basis of the provisions and/or agreements that occasion the student to apply for the course.

## **8 Transfer of credits for courses, study programmes and other experience**

Provisions on the transfer of credits can be found in the Higher Education Ordinance and on the university's webpage.

## **9 Other information**

The language of tuition may be English or Swedish, depending on the participants' language skills. The literature is mainly in English.

Research students who have been admitted to a course have the right to receive tuition and / or supervision for the duration of the time period specified for the particular course to which they were accepted. After that, the right to receive tuition and/or supervision expires.

## **Transitional provisions**