



## DEPARTMENT OF PSYCHOLOGY

## XXXnnnn General Research Methodology: Design, Analysis and Report (15 HEC)

Allmän forskningsmetodik: design, analys och rapport (15 högskolepoäng)

*Third Cycle/Forskarnivå*

### Confirmation

This course syllabus was confirmed by the Department of Psychology on 2011-09-30, and was revised on 2017-02-27. The revised course syllabus is valid from and including 2017

### Entry requirements

The student must be admitted to the PhD Programme.

### Learning outcomes

After completing the course, the PhD student will be able to:

#### *Knowledge and understanding*

- demonstrate familiarity with scientific principles and existing methods for research design and analysis in psychological research
- show understanding of how to review the quality of scientific work
- show good insight into statistical thought, and understanding of the statistical aspects of scientific questions
- present knowledge about statistical tools which are used within psychological research
- outline different types of research reviews and their characteristics

#### *Skills and abilities*

- review the quality of scientific work, compose a research ethics application and an application for a research grant
- make judgments about the methodological strengths and weaknesses of different research designs, with respect to explanatory ambitions and empirical conditions
- independently choose appropriate statistical tools for a given research question
- show the ability to independently design a literature review

#### *Judgement and approach*

- identify and analyse questions about research ethics which occur in psychological research
- critically review published literature reviews and meta-analyses

## Course content

The course covers central aspects of the research process, as well as principles and questions related to quality assessment, research planning, problem formulation, statistical data analysis, presentation of a research project, and research ethics.

### *Sub-courses*

**1. The research process - from problem to report** (*Forskningsprocessen – från problem till rapport*), 4 credits

This sub-course covers the different stages of the research process, from problem formulation to report. The course provides insight into the different tasks involved in the researcher's role, in particular systems for quality assessment and publication through peer review. The course participants will complete their own research grant application, as well as a research ethics application.

**2. Design issues in psychological research** (*Designfrågor i psykologisk forskning*), 3 credits

This sub-course covers central concepts in the research process, and types of research design. Other subjects addressed include: theory, empiricism, causality, validity, qualitative/quantitative approaches, experiments, quasi-experiments, correlational designs, questionnaire and interview studies, and the application of the above in different research designs. Philosophical assumptions are also discussed in relation to planning research.

**3. Principles of statistical data analysis** (*Principer för statistisk dataanalys*), 5 credits

This sub-course covers the basic principles of statistical data analysis, and also problematizes traditional statistical hypotheses testing. The sub-course covers parametric and non-parametric, univariate and multivariate methods, the advantages and limitations of different methods are clarified.

**4. Literature reviews and meta-analysis** (*Litteraturöversikter och meta-analyser*), 3 credits

This sub-course covers different types of research reviews, how they are conducted and reported. Inclusion/exclusion principles for primary studies are covered, as well as choice and analysis of moderating factors. Statistical measures in meta-analysis are explained, such as average effect size and homogeneity of effect size. The sub-course includes a section in which review and design of literature reviews is covered.

## Form of teaching

Teaching takes place in the form of lectures and seminars.

### *Language of instruction:*

The language of instruction is Swedish, but the course can be conducted in English if necessary.

## Grades

The grading scale comprises: Pass (G) and Fail (U). The sub-courses are graded separately.

## Form of assessment

All teaching can be used as the basis for examination. The course is examined individually. The course is examined through oral presentations, seminars, individual written exercises or exams. For PhD students who fail, it is possible to repeat the exam. A PhD student who has taken two examinations in a course or a part of a course without obtaining a pass grade is entitled to the nomination of another examiner, unless there are special reasons to the contrary (HF 6 chap. 22§). Such a request should be made in writing to the department responsible for the course.

### **Course evaluation**

The teacher responsible for each sub-course gives participants the opportunity to complete a course evaluation at the end of the course, and ensures that the course evaluation is compiled and presented to FUB.

### **Additional information**

A diagnostic test about central concepts relating to research methods, and basic statistical calculations, takes place at the beginning of the course.

The teacher responsible for each sub-course gives participants the opportunity to complete a course evaluation at the end of the course, and ensures that the course evaluation is compiled and presented to FUB.

Attendance at seminars and presentations is required. Arrangements to compensate for absence are made in agreement with the responsible teacher.

Course registration is made with the Postgraduate studies officer at the Department of Psychology.

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The course literature is available in the form of an attachment