



DEPARTMENT OF PSYCHOLOGY

PX33002 Experimental methods, 7.5 credits

Experimentell metodik, 7,5 högskolepoäng

Third-cycle level / Forskarnivå

Confirmation

This syllabus was confirmed by the Department of Psychology on 2018-09-21, and was last revised on 2022-11-28. The revised course syllabus is valid from Spring semester 2023.

Responsible Department

Department of Psychology, Faculty of Social Sciences

Entry requirements

The student must be admitted to the PhD Programme in Psychology.

The student must also have a passing grade on the third cycle course General Research Methodology: Design, Analysis and Report (15 HEC), or have equivalent knowledge obtained in another manner.

Learning outcomes

A student who successfully completes the course should be able to:

Knowledge and understanding

- describe the principles for different types of experimental designs
- identify the necessary validity and reliability considerations in planning an experiment
- reason about questions relating to effect size, power and the assumptions of data analysis

Competence and skills

- analyse experimental data using analysis of variance and regression analysis
- master strategies and methods relating to follow-up data analysis (e.g., contrasts, post hoc tests, mediation analysis)
- report experimental studies according to international standards for scientific journals

Judgement and approach

- show the ability to critically review experimental designs
- show the ability to independently plan and analyse experimental studies

Course content

The course covers the research process for experimental studies, from design and analysis to publication. Following an introduction to the philosophy of science in relation to experimental studies, as well prominent types of research designs, the choice and testing of independent and dependent variables will be problematized. Questions about power, effect size, statistical assumptions and verification procedures are addressed. The course covers analysis of experimental data (e.g., main effects, interactions, a-priori contrasts, post hoc tests, mediation analysis) for different types of designs. The course furthermore includes a section about how experimental studies are reported, including publication strategies.

Types of instruction

Teaching will take place in the form of lectures, seminars and exercises.

Language of instruction

The course is given in Swedish but can be given in English if necessary.

Grades

The grade Pass (G) or Fail (U) is given in this course.

Types of assessment

Examination will be in the form of individual written assignments and active participation in seminars. Attendance is mandatory at seminars.

Absence must be compensated according to the course leader's instructions.

A doctoral student, who has failed twice in the same examination, has the right to have another examiner appointed, unless special reasons contradict it. Such a request is to be submitted to the department in writing and granted unless there are special reasons to the contrary. If the course is changed to content and/or literature, examination can be done according to this syllabus within one year of the change. In the event that the course has ceased, it can be examined within one year after the course has last been given. Thereafter, it should be scrutinized in each individual case if examination may be made.

Course evaluation

The course coordinator is responsible for ensuring that doctoral students are given the opportunity to provide an anonymous, written course evaluation at the end of the course. After the course is finished, the course coordinator writes a course report, which includes a summary

of the course evaluation. The course report is processed in the Drafting committee for doctoral studies (FUB) and will be communicated to those doctoral students who completed the course evaluation, as well as the doctoral students who will start the next course. These reports will be made available for doctoral students.