

## Quasi-Experimentation and Statistical Analysis

Kvasiexperiment och statistisk analys  
6 credits

Single subject and programme course

729G88

Valid from: 2022 Autumn semester

<b>Determined by</b>	<b>Main field of study</b>	
Course and Programme Syllabus Board at the Faculty of Arts and Sciences	Cognitive Science	
<b>Date determined</b>	<b>Course level</b>	<b>Progressive specialisation</b>
2019-12-03	First cycle	G2F
<b>Revised by</b>	<b>Disciplinary domain</b>	
Course and Programme Syllabus Board at the Faculty of Arts and Sciences	Social sciences	
<b>Revision date</b>	<b>Subject group</b>	
2022-04-29	Other Interdisciplinary Studies	
<b>Offered first time</b>	<b>Offered for the last time</b>	
Autumn semester 2020		
<b>Department</b>	<b>Replaced by</b>	
Institutionen för beteendevetenskap och lärande		

## Course offered for

- Bachelor's Programme in Cognitive Science

## Entry requirements

General entry requirements for undergraduate studies  
and

Social Studies, English and Mathematics corresponding to the level in Swedish upper secondary education (Samhällskunskap 1b or 1a1 and 1a2, Engelska 6, Matematik 3b/3c or Matematik C)

and

At least 90 ECTS credits passed from the Cognitive Science bachelor's program semester 1 to 4, including the courses Cognitive Science Introductory Course 9 ECTS credits, Information Technology and Programming 12 ECTS credits, and Research Methodology and Statistics 9 ECTS credits, or equivalent.

## Intended learning outcomes

On completion of the course, the student should be able to:

- design a quasi-experimental study based on a research question
- conduct a quasi-experimental study in an ethically relevant way
- analyze data from a quasi-experimental study
- interpret results from a quasi-experimental study

## Course content

The course covers:

- design of quasi-experimental research studies based on advanced quantitative methods
- validity and reliability
- statistical analyzes with two or more variables, in particular ANOVA & multiple regression analysis
- critical analysis of scientific texts
- writing scientific texts
- applied ethics

## Teaching and working methods

Teaching will take the form of lectures, seminars, labs and group work. Students are expected to work independently, both alone and in groups.

## Examination

The course is examined by:

- project work with written and oral presentation, grading scale: EC
- individual oral presentations, grading scale: UG
- active participation in seminars, grading scale: UG

To get the grade Pass on the course, all parts must have the grade Pass. A higher grade is based on the project work.

Detailed information will be available in the course guide.

If special circumstances prevail, and if it is possible with consideration of the nature of the compulsory component, the examiner may decide to replace the compulsory component with another equivalent component.

If the LiU coordinator for students with disabilities has granted a student the right to an adapted examination for a written examination in an examination hall, the student has the right to it.

If the coordinator has recommended for the student an adapted examination or alternative form of examination, the examiner may grant this if the examiner assesses that it is possible, based on consideration of the course objectives.

An examiner may also decide that an adapted examination or alternative form of examination if the examiner assessed that special circumstances prevail, and the examiner assesses that it is possible while maintaining the objectives of the course.

Students failing an exam covering either the entire course or part of the course twice are entitled to have a new examiner appointed for the reexamination.

Students who have passed an examination may not retake it in order to improve their grades.

## Grades

ECTS, EC

## Other information

Planning and implementation of a course must take its starting point in the wording of the syllabus. The course evaluation included in each course must therefore take up the question how well the course agrees with the syllabus.

The course is conducted in such a way that there are equal opportunities with regard to sex, transgender identity or expression, ethnicity, religion or other belief, disability, sexual orientation and age.

If special circumstances prevail, the vice-chancellor may in a special decision specify the preconditions for temporary deviations from this course syllabus, and delegate the right to take such decisions.

### About teaching and examination language

The teaching language is presented in the Overview tab for each course. The examination language relates to the teaching language as follows:

- If teaching language is “Swedish”, the course as a whole could be given in Swedish, or partly, or as a whole, in English. Examination language is Swedish, but parts of the examination can be in English.
- If teaching language is “English”, the course as a whole is taught in English. Examination language is English.
- If teaching language is “Swedish/English”, the course as a whole will be taught in English if students without prior knowledge of the Swedish language participate. Examination language is Swedish or English depending on teaching language.