

## Multiple Regression and Time Series Analysis

Regressions- och tidsserieanalys

7.5 credits

Single subject and programme course

732G93

Valid from: 2023 Spring semester

<b>Determined by</b>	<b>Main field of study</b>	
Course and Programme Syllabus Board at the Faculty of Arts and Sciences	Statistics	
<b>Date determined</b>	<b>Course level</b>	<b>Progressive specialisation</b>
2021-03-08	First cycle	G1F
<b>Revised by</b>	<b>Disciplinary domain</b>	
Course and Programme Syllabus Board at the Faculty of Arts and Sciences	Natural sciences	
<b>Revision date</b>	<b>Subject group</b>	
2022-05-03	Statistics	
<b>Offered first time</b>	<b>Offered for the last time</b>	
Spring semester 2022		
<b>Department</b>	<b>Replaced by</b>	
Institutionen för datavetenskap		

## Course offered for

- Bachelor's Programme in Political science and economics

## 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)

At least 1,5 ECTS credits passed in Statistics or equivalent

## Intended learning outcomes

On completion of the course, the student should

- account for and apply the most common statistical inference methods in regression and time series analysis incl. time series linked to demand and index series
- assess which model is relevant for different data
- assess the quality of data and interpret the results of regression and time series analyzes
- analyze the data material using standard statistical software

## Course content

The following is studied in the course

- Simple and multiple linear regression,
- Index theory and demand analysis,
- Descriptive time series analysis with decomposition and forecasting,
- Standard programs for regression and time series analysis are used in the course.

## Teaching and working methods

Lectures, teaching sessions, individual and joint supervision, computer exercises and project work.

Language of instruction: Swedish.

In addition to this, the student must practice self-study.

## Examination

The course is examined by:

- individual written exam, grading scale: UV
- oral and written presentation of project work in groups, grading scale: UG

For Passed final grade, Pass is required in all parts. For Pass with Distinction, Pass with Distinction is also required for the individual written examination.

Detailed information about the course can be found in the study instructions.

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

Three-grade scale, U, G, VG

## 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 carried out in such a way that both men's and women's experience and knowledge is made visible and developed.

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.