



## DEPARTMENT OF ECONOMICS

### **STK141 Statistics: Basic course 4, 7.5 credits**

Statistik: Grundkurs 4, 7,5 högskolepoäng

*First Cycle*

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#### **Confirmation**

This course syllabus was confirmed by Department of Economics on 2020-12-10 to be valid from 2021-08-30, autumn semester of 2021.

*Field of education:* Social Sciences 100%

*Department:* Department of Economics

#### **Position in the educational system**

STK141 is a 7.5 credits course in Statistics within the first-cycle level.

The course can be part of the following programmes: 1) European Studies Program (S1EUR) and 2) Program in Political Science (S1STV)

#### *Main field of studies*

Statistics

#### *Specialization*

G1F, First cycle, has less than 60 credits in first-cycle course/s as entry requirements

#### **Entry requirements**

Admission to the course requires previous knowledge of statistics 15 ECTS or equivalent.

#### **Learning outcomes**

On successful completion of the course the student will be able to:

1. perform ANOVA for independent populations and repeated measurements
2. perform MANOVA for independent populations
3. perform principal component analysis and factor analysis
4. perform stratified sampling and cluster selection

## 5. critically review statistical material and methods and relate to their limitations

How overall learning goals of the bachelor's degree are related to the learning outcomes of the course:

Overall learning goals	Learning outcomes
Knowledge and understanding	1, 2, 3, 4
Skills and abilities	1, 2, 3, 4
Judgement and approach	5

### Course content

The course deals with methods for assessing the uncertainty in the conclusions drawn from a limited amount of information. In statistical analysis, the computer is an indispensable tool. Therefore, the course is largely based on computer-based project work.

The course includes methods to analyze and interpret linear models and relationships between two or more quantitative and / or qualitative variables. In particular, the course aims to provide an in-depth knowledge of linear models. Methods for examining and managing the common problems that may arise when estimating statistical models are included.

In addition, the course includes methodology for stratified sampling and cluster sampling. The course also highlights ethical aspects in data collection and statistical analysis.

### Form of teaching

The course content is presented at lectures. A large part of the knowledge acquisition on the course is done through own work by the student.

*Language of instruction:* Swedish

Teaching activities in English may occur.

### Assessment

The learning outcomes are examined through written assignments and a written exam. To be given a passing grade on the course, passing grades are required on both of these parts. A passing grade for the assignments requires that all are approved within the same or at most two adjacent course rounds.

A student who has taken two exams in a course or part of a course without obtaining a pass grade is entitled to the nomination of another examiner. The student needs to contact the department for a new examiner, preferably in writing, and this should be approved by the department unless there are special reasons to the contrary (Chapter 6 Section 22 of the Higher Education Ordinance).

If a student has received a recommendation from the University of Gothenburg for special educational support, where it is compatible with the learning outcomes of the course and provided that no unreasonable resources are required, the examiner may decide to allow the student to sit an adjusted exam or alternative form of assessment.

In the event that a course has ceased or undergone major changes, students are to be guaranteed at least three examination sessions (including the ordinary examination session) over a period of at least one year, but no more than two years, after the course has ceased/been changed. The same applies to placements and professional placements (VFU), although this is restricted to just one additional examination session.

### **Grades**

The grading scale comprises: Excellent (A), Very good (B), Good (C), Satisfactory (D), Sufficient (E) and Fail (F).

### **Course evaluation**

Course evaluation is done digitally and anonymously at the end of the course.

The survey material is compiled and the results from the course evaluation and proposals for possible improvement measures are discussed at the course committee meeting. After the course evaluation is completed, the result will be published at the course homepage.

If a change of course is done based on the course evaluation, this will be communicated at the course introduction for the upcoming student group.

### **Additional information**

1. Transitional rules: the course replaces the course STK140.
2. Limitations: the course cannot be used in a degree together with STK140, STG160, STG180 or STG182.