

# Syllabus

for course at first level

**Econometrics**  
**Ekonometri**

**15.0 Higher Education**  
**Credits**  
**15.0 ECTS credits**

<b>Course code:</b>	ST223G
<b>Valid from:</b>	Autumn 2014
<b>Date of approval:</b>	2012-03-14
<b>Changed:</b>	2014-03-12
<b>Department</b>	Department of Statistics
<b>Main field:</b>	Statistics
<b>Specialisation:</b>	G1F - First cycle, has less than 60 credits in first-cycle course/s as entry requirements

## Decision

This syllabus was approved by the Board of the Department of Statistics on March 14, 2012, and revised 2014-03-12.

## Prerequisites and special admittance requirements

Statistical Theory with Applications, first level, 15 ECTS credits or equivalent.

## Course structure

Examination code	Name	Higher Education Credits
31ET	Regression analysis, examination	6
41ET	Time series analysis, examination	6
42EI	Compulsory exercise in time series analysis	1.5
32EI	Compulsory exercise in regression analysis	1.5

## Course content

The course consists of four course units:

1. Regression analysis, examination
2. Compulsory exercise in Regression analysis
3. Time Series Analysis, examination
4. Compulsory exercise in Time Series Analysis

The course provides basic knowledge in econometrics. The students should be able to express economic and financial theory within an econometric model. The students should also be able to estimate common econometric models, analyse the results and be aware of limitations and possible sources of errors in the analysis. The course also provides knowledge of applications of statistical methods within econometrics and knowledge of using statistical software.

The first two course units cover simple and multiple regression with emphasis on the consequences of, and measures needed for incorrect model assumptions. Furthermore, models for binary dependent variables, such as the logit and probit models, are covered.

In the course's last two course units analysis of time series is covered. Special focus is on exponential

smoothing, the ARIMA and VAR models and models for analysis of panel data. In addition, students will study causality, volatility models (for example, the ARCH and GARCH models), the error correction model and cointegration.

The concepts that are more thoroughly treated are: simple and multiple regression analysis, model assumptions, the discovery of/consequences of/measures needed for incorrect model assumptions, diagnostic testing, models for panel data, exponential smoothing, the ARIMA, VAR and volatility models.

### **Learning outcomes**

To pass the course the student should be able to:

- conduct analyses of different econometric problems with the use of regression models
- conduct analyses of econometric time series with the use of time series models

### **Education**

The teaching forms consists of lectures and exercises.

### **Forms of examination**

- Examination will be done by assessing the learning outcomes. Examination will be in the form of written tests and written reports of compulsory exercises
- Grading is done according to a seven-point scale related to the specified learning outcomes:  
A = Excellent  
B = Very Good  
C = Good  
D = Satisfactory  
E = Adequate  
Fx = Inadequate  
F = Totally Inadequate
- The assessment criteria for the course will be distributed at the beginning of the course.
- In order to pass the course, the grade E or higher is required on the course units 1 and 3, and a pass on the course units 2 and 4.
- Students who have received the grade Fx or F on an examination are entitled to at least four additional examinations to achieve the lowest grade E as long as the course is given. Neither Fx or F are passed grades and both demands a re-examination. Students who have received the grade E on an examination may not retake this examination in order to attempt to achieve a higher grade.

Students who have received the grade Fx or F on an examination on two occasions by the same examiner have the right to request that a different examiner be appointed to set the grade of the examination. The request must be in writing and sent to the head of the department. The examination denotes all compulsory elements of the course.

Every time the course is given, there should be two examination opportunities during the current semester.

### **Interim**

Students can request examination in accordance with this syllabus once per semester during a period of three semesters after the course is no longer given. The request must be in writing and sent to the head of the department.

### **Limitations**

This course may not be included in a degree together with the course Econometrics (ST220G) 15 ECTS credits or equivalent.

### **Required reading**

The course literature is described in an appendix to the syllabus.