

Syllabus

for course at first level

Introduction to quantitative methods in economics
Introduktion till kvantitativa metoder för nationalekonomer

**7.5 Higher Education
Credits**
7.5 ECTS credits

Course code:	EC2400
Valid from:	Spring 2022
Date of approval:	2020-11-12
Department	Department of Economics
Main field:	Economics
Specialisation:	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 Economics on 12 November, 2020.

Prerequisites and special admittance requirements

Economics I, 30 credits, or the equivalent.

Course structure

Examination code	Name	Higher Education Credits
240A	Introduction to quantitative methods in economics	7.5

Course content

The course provides an introduction to quantitative methods for economists so that the student, in a satisfactory manner, will be able to complete economics studies at advanced level.
The course is divided into a part for basic mathematical methods and a part for basic statistical methods.

The first part of the course aims to provide students with knowledge of basic mathematical methods for further studies in microeconomics and macroeconomics. This part includes optimization with side conditions, basic matrix algebra and linear and log-linear approximation of functions and equations.

The second part of the course aims to provide students with knowledge of basic statistical methods for conducting hypothesis tests on economic issues. The course deals with stochastic variables, probability theory, discrete and continuous probability distributions, bivariate probability distribution, expected values, random samples, sampling distributions, point estimates, confidence intervals and hypothesis testing.

Learning outcomes

Upon completion of this course, the student is expected to be able to:

1. Describe the key elements of basic mathematical and statistical methods needed for postgraduate economics studies.
2. Correctly apply the methods for solving economic practical problems.
3. Explain why different methods are used for different economic problems.

Education

Instruction is given in the form of lectures and group work. The language of instruction is English.

Forms of examination

The course is examined on the basis of a written examination. Students may be awarded examination credits during the course through voluntary partial examination during the course.

Students will receive letter grades on a seven-point scale related to the learning objectives of the course: Passing grades are A, B, C, D and E, where A is the highest grade and E the lowest. Failing grades are F and Fx, where F is lower than Fx.

Assessment criteria:

- **A (Excellent):** The student can in a well-developed reasoning account for the central parts of basic mathematical and statistical methods needed for economics studies at advanced level. Furthermore, the student can correctly apply the methods for solving economic practical problems. The student can also very well explain why different methods are used for different economic problems.
- **B (Very good):** The student can in a developed reasoning account for the central parts of basic mathematical and statistical methods needed for economics studies at advanced level. Furthermore, the student can correctly apply the methods for solving economic practical problems. The student can also explain why different methods are used for different economic problems.
- **C (Good):** The student can account for the central parts of basic mathematical and statistical methods needed for economics studies at advanced level. Furthermore, the student can mostly correctly apply the methods to solve economic practical problems. The student can also explain why different methods are used for different economic problems.
- **D (Satisfactory):** The student can account for a majority of the central parts of basic mathematical and statistical methods needed for economics studies at advanced level. Furthermore, the student can mostly correctly apply the methods to solve economic practical problems. The student can also to some extent explain why different methods are used for different economic problems.
- **E (Sufficient):** The student can account for some of the central parts of basic mathematical and statistical methods needed for economics studies at advanced level. Furthermore, the student can mostly correctly apply the methods to solve economic practical problems. The student can to a small extent explain why different methods are used for different economic problems.
- **FX (Insufficient) and F (Completely insufficient):** The student does not meet the grading criteria for the grade E.

For students who have received the grade FX or F on an examination, there are no restrictions on how many times you may retake an examination to achieve a grade of E or higher.

Interim

If this course is discontinued, students have the right to be examined on the course once per semester for three further semesters.

Required reading

See course homepage available from www.ne.su.se.