



# AI2131 Economics and Quantitative Methods 5.0 credits

## Economics and Quantitative Methods

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

## Establishment

Course syllabus for AI2131 valid from Autumn 2007

## Grading scale

A, B, C, D, E, FX, F

## Education cycle

Second cycle

## Main field of study

Built Environment

## Specific prerequisites

## Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

## Intended learning outcomes

After this course students will be able to:

Perform calculations in basic financial mathematics and model these in Excel

Perform computations involving statistical inference and regression analysis

Perform regressions in Excel

Explain and analyze basic microeconomic issues involving

- Demand and supply
- Production and costs
- Market structure

Explain the basic goals of macroeconomic policy and how to measure national income

Explain fiscal and monetary policy and identify the relevant policy instruments

## Course contents

A. Financial mathematics

B. Introduction to Excel

C. Statistics

- Descriptive statistics – frequency distribution, measures of central tendency and dispersion
- Probability concepts
- Regression analysis

D. Economics

- Demand, supply, equilibrium prices and elasticity
- Short-run and long run production theory
- Short and long-run costs
- Perfect competition & monopoly
- National income accounting, national income determination, fiscal and monetary policy

## Course literature

Stiglitz J.E & Driffill, Economics. W.W. Norton & Co, 2000

## Examination

- TEN1 - Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 2.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

## Other requirements for final grade

Examination, TEN1, 3.0 credits, A-F

Exercises, ÖVN1, 2.0 credits, P/F

## Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.