



# AI1108 Investment Analysis 7.5 credits

## Investeringsanalys

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

## Establishment

Course syllabus for AI1108 valid from Autumn 2017

## Grading scale

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

## Education cycle

First cycle

## Main field of study

Technology

## Specific prerequisites

Students enrolled in the Degree programme in Civil Engineering and Urban Management and students enrolled in the Bachelor's programmes in Real Estate and Finance and Property Development and Agency at KTH should have completed Economics (AI1107) or Economics of the Built Environment (AI1128).

## Language of instruction

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

## Intended learning outcomes

The course aim is to provide basic theoretical and practical knowledge about investment analysis, with emphasis on real estate.

The course should give you knowledge in how to:

- Derive the origin of and apply the major mathematical formulas used in cash-flow analysis of investments.
- Professionally and critically motivate and evaluate the major steps in an investment analysis.
- Define, compute and evaluate different return measures, based on cash-flows.
- Make calculations and investment analysis in both nominal and real terms
- Deal with risk and uncertainty applying sensitivity analysis.
- Understand how leverage affects investments.
- Develop Excel spreadsheets for investment decision-making.
- Understand how discount rates on different levels are set.
- Identify and deal with quantified and unquantified sustainability aspects, when analyzing different investment alternatives for decision making.

## Course contents

The course contains the following parts:

- Capital budgeting. The aim is to provide advanced knowledge in theory and methods for asset valuation and profitability analysis of investments and decision criteria in capital budgeting such as present value and internal rate of return etc.
- The mathematics used in dealing with the time value of money
- Cash flow analysis of complex investments with emphasis on property applications. Analysis of financing decisions.
- Project work: making a cash flow analysis in Excel.

## Disposition

Lectures and teacher-assisted group exercises. Some group exercises take place in a computer lab. The students shall also, in groups, construct a cash flow proforma in Excel and present this work for the teachers under given assumptions. Students will be divided into working groups by the headteacher.

## Course literature

Jonathan Berk & Peter DeMarzo -Corporate Finance (Pearson International Edition), latest edition.

## Equipment

Calculator

## Examination

- PRO2 - Project, 2.5 credits, grading scale: P, F
- TEN2 - Written Exam, 5.0 credits, grading scale: A, B, C, D, E, FX, 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.

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

The project is performed in groups of three students, but the examination is individual.

## Other requirements for final grade

Project work (PRO2) with grade P and written exam (TEN2) with grade E or higher. If these requirements are fulfilled, the final grade on the course will be the same as the grade on the written exam (TEN2)

## 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.