



# AI2113 Real Estate Investment Analysis 4.5 credits

## Real Estate Investment Analysis

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 AI2113 valid from Autumn 2008

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

## Specific prerequisites

AI2112 Economics.

## Language of instruction

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

## Intended learning outcomes

The course should allow participants to use the tools that enable them to evaluate the profitability of real estate investments. This will also allow them to model one of the most commonly used valuation methods for real estate assets – the discounted cash-flow model. This course is thus a prerequisite for Real Estate Valuation.

After the course, students should be able to:

- Explain the strengths and weaknesses of the various investment decision criteria
- Use capital budgeting techniques to analyze the profitability of real estate investment decisions
- Value different types of real estate cash flows
- Use MS-Excel to build real estate cash flow models that can be used for investment decision-making and valuation
- Work as part of a team of people with different backgrounds

## Course contents

Formulation of investment problems. Capital budgeting techniques: Net Present value, Pay-back period, and Internal rate of return. Application of the techniques to different cash flows: annuities, sinking funds, and uneven cash flows. Taxes, depreciation as well as measures of risk and return. Nominal and real discount rates. Introduction to real estate cash flow models using MS-Excel.

## Course literature

Text Book:

- Ling, D.C. & Archer, W.R. (2005). Real Estate Principles – A Value Approach. McGraw-Hill, New York.

Articles: (Will be provided by the teacher)

- Brown, G.R., & Matysiak, G.A. (2000). Real Estate Investment – A Capital Market Approach. Financial Times/Prentice-Hall.
- Jaffe, A.J. & Sirmans, C.F. (1995). Fundamentals of Real Estate Investment, 3rd Edition, Prentice-Hall.

## Examination

- TEN1 - Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 1.5 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 credits, A-F)

Exercise ( ÖVN1, 1,5 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.