



SF2976 Portfolio Theory, Advanced Course 7.5 credits

Portföljteori, fördjupningskurs

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 SF2976 valid from Autumn 2007

Grading scale

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

Education cycle

Second cycle

Main field of study

Specific prerequisites

SF2942 Portfolio Theory and Risk Management.

Language of instruction

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

Intended learning outcomes

To pass the course, the student should be able to do the following:

- Account for and determine optimal portfolios in single period models.
- Account for and determine the statistical properties of asset return series and analyse robustness of the underlying portfolios with regard to model misspecification.
- Implement the different optimisation methods for real financial time series within a strategic and tactical asset allocation exercise.

To receive the highest grade, the student should in addition be able to do the following:

- Combine all the concepts and methods mentioned above in order to solve more complex problems.

Course contents

Valuation, utility maximization and investment in single period models, The Markowitz model, CAPM, ALM (Asset and Liability Management), Bayesian approach to portfolio choice, the Black-Litterman model, Risk budgeting, portfolio resampling, Scenario optimisation, Benchmark-based portfolio choice, Applications.

Examination

- LAB1 - Laboratory Work, 1.5 credits, grading scale: P, F
- LAB2 - Laboratory Work, 1.5 credits, grading scale: P, F
- TENA - Examination, 4.5 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.

Other requirements for final grade

Written examination (7,5 university credits).

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.

