SF2974 Portfolio Theory and Risk Management 6.0 credits

Portföljteori och riskvärdering

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

Establishment

Course syllabus for SF2974 valid from Autumn 2009

Grading scale

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

Education cycle

Second cycle

Main field of study

Industrial Management, Mathematics

Specific prerequisites

Optimization corresponding to SF1811/5B1712 and Mathematical statistics corresponding to SF1901 (5B1501).

Language of instruction

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

Intended learning outcomes

The aim of the course is that the student should master the methods and concepts of classical portfolio theory, basic interest rate theory and the measurement and management of risk. The student should also be able to, according to different criteria, contruct optimal portfolios of financial assets and instruments for financial risk management.

Course contents

Interest rate theori, bonds, term structures, immunization, efficient portfolios, Markowitz portfolio analysis, the one- and two-fund theorems, CAPM, factor models, portfolio analysis with expected utility theory, and the theory of risk measures and their use in portfolio analysis.

Course literature

Material from the department.

Examination

- TEN1 - Examination, 6.0 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.

Other requirements for final grade

One written exam (6 university credits). Voluntary homework sets.

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.