SF2701 Financial Mathematics, Basic Course 7.5 credits

Finansiell matematik, grundkurs

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

Establishment

Course syllabus for SF2701 valid from Autumn 2007

Grading scale

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

Education cycle

Second cycle

Main field of study

Mathematics

Specific prerequisites

Linear Algebra 5B1108 (or 5B1109), Calculus 5B1102 (or 5B1103), Probability Theory and Statistics 5B1501 (or Mathematical Statistics, Basic Course 5B1504/5B1506).

Language of instruction

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

Intended learning outcomes

This course is aimed at those wants to achieve a general education in financial mathematics. It is also suitable as a preparation for the course SF2975 Financial Derivatives.

Course contents

- Interest Theory: yield, present value, duration, term structure.
- Arbitrage pricing: risk neutral pricing, martingale pricing.
- Financial derivatives: forwards, futures, swaps, options; Black-Sholes-Mertons formula. Hedging. Interest rate models and interest rate derivatives.

Course literature

To be announced at course start. Last time the following book was used:
J. Hull: Options, Futures and Other Derivatives, 4:th ed.

Examination

- TEN1 - Examination, 7.5 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.

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

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.