



SF2961 Mathematics in General Insurance 7.5 credits

Sakförsäkringsmatematik

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

Establishment

Course syllabus for SF2961 valid from Autumn 2007

Grading scale

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

Education cycle

Second cycle

Main field of study

Specific prerequisites

SF2940 Probability theory.

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:

- define standard models in insurance mathematics
- derive estimates of parameters in the models
- fit models to real insurance data and with computer software analyse the results
- apply models to real data
- explain the basics of Dynamical Financial Analysis (DFA)

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

Collective and individual models. Simultaneous distributions. Mathematical models for re-insurance, especially Excess of loss. Fit model to real insurance data. Numerical methods for calculation of the distribution of the total claim size for a portfolio. Analysis of real insurance cases. Orientation in Dynamical Financial Analysis.

Course literature

To be announced.

Examination

- INL1 - Project, 3.5 credits, grading scale: P, F
- TEN1 - Examination, 4.0 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

Written exam.

Project assignments.

Participation at seminars.

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.