Linnæus University

Course syllabus

Faculty Board of Science and Engineering
School of Computer Science, Physics and Mathematics

4MA202 Försäkringsmatematik, 7,5 högskolepoäng
Insurance Mathematics, 7.5 credits

Subject Group
Mathematics

Level of classification
Second Level

Progression
A1N

Date of Ratification
Approved by Organisational Committee 2009-12-01

The course syllabus is valid from autumn semester 2010

Prerequisites
Mathematical statistics, 7.5 hec, or equivalent.

Expected learning outcomes
The student should be able to:

- understand and describe the basic concepts in life and non life insurance mathematics as well as risc theory
- apply and interpret the various methods of computing in life and non life insurance mathematics
- recall Hattendorff's theorem and be able to apply it
- relate the basic notions introduced in the course and apply the relation to more complex problems
- interpret, communicate on and lead an argument in topics of insurance mathematics.

Content
The course contains:

- premium principle
- utility theory
- risc theory och ruin probabilities
- reinsurance
- life insurance mathematics (equivalence principles, Hattendorffs theorem).

Type of Instruction

Lectures and seminars. Compulsory assignments may be given during the course.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).
The student's knowledge is assessed in the form of oral and/or written examinations. The principal assessment method for the course is determined at the beginning of the course.

On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

Course Evaluation

After the course a written evaluation of the course will take place according to the University guidelines.

Other

On request, a Swedish University course certificate will be awarded upon successful completion of the course.

Required Reading and Additional Study Material

Required reading

Kaas, R., Goovaerts, M., Dhaene, J.,Denuit, M.; Modern Actuarial Risk Theory, 1st edition, Springer, Berlin. 306 pages

DFM, *Compendium*. Linnaeus University, present year.