AKTUARVEREINIGUNG
ÖSTERREICHS

ÖSTERREICHISCHE GESELLSCHAFT
FÜR VERSICHERUNGSFACHWISSEN

UNIVERSITÄT
SALZBURG

Salzburg Institute of Actuarial Studies
5020 Salzburg, Hellbrunner Straße 34

Invitation to a Course on Statistical Methods in Insurance: Applications

Summer Semester 2006
Salzburg University

Lecturer: Dr. Richard Herrmann
Member of the board of directors, Heubeck AG, Cologne
Visiting professor at Salzburg University

Dates: On the following Fridays from 9 a.m. to 1 p.m.:

10th March 2006
24th March 2006
21st April 2006
12th May 2006
9th June 2006
23rd June 2006

Contents: The two courses "Statistical Methods in Insurance: Applications" and "Statistical Methods in Insurance: Advanced Tools" (which can be attended in any order) cover all aspects of statistical methods in insurance required to become a fully qualified actuary according to the core syllabus of the International Actuarial Association and the core syllabus of Groupe Consultatif, according to the regulations of the Actuarial Association of Austria (AVÖ), as well as according to the regulations of the German Actuarial Association (DAV). The German regulations have just been revised; the courses are in full accordance with the new German requirements. Both courses are suited to all those who want to acquire knowledge of statistical methods in insurance. They are also of interest to experienced practitioners. Basic stochastic knowledge is required. Details of the course structures can be found below.

Course fees: 948 euros. The course fees cover the 6 overnight accommodations from Thursday to Friday in a 4 star hotel including breakfast.

The fees for participants who do not need accommodation are 444 euros.

Information: For further information, please contact Sarah Lederer by fax (+43 662 8044 155) or e-mail (sarah.lederer@sbg.ac.at) with your telephone number. Your questions will be answered as soon as possible.

Registration: Please send the attached registration form by post or fax it to +43 662 8044 155, and arrange for the amount to be transferred (at no cost to the recipient) to the following account before 15th February 2006:

Salzburg Institute of Actuarial Studies (SIAS)
IBAN: AT 792 040 400 000 012 021 BIC: SBGSAT2S

Location: Lecture Hall 414 in the Faculty of Science
A-5020 Salzburg, Hellbrunner Straße 34

Course Structure

Statistical Methods in Insurance: Applications (SS 2006)

- Point estimation
  - maximum likelihood estimate and practical implementation
  - Bayes statistic
- Credibility
  - Bayes approach and method of Bühlmann-Straub
- Testing hypotheses
  - minimum sample size and standard statistical tests
  - likelihood ratio test
  - nonparametric test methods
- Generalized linear models
  - regression and analysis of variance
- Population models and biometric tables
  - methods for deducing raw probabilities
  - smoothing methods and trends
  - regarding risk
  - modelling claims per capita in private health insurance
- Data mining
  - principal component analysis
  - discriminant analysis

Statistical Methods in Insurance: Advanced Tools (preview to a further course)

- Distribution functions and quantiles
  - one-dimensional discrete and continuous distributions
  - certain distributions for risk modelling (one- and multidimensional)
- Risk measurement
  - risk of random fluctuation and model risk
  - quantification of risk measurement
- Stochastic risk modelling
  - basic stochastic processes
  - dependence structures
  - time series analysis
- Monte Carlo simulation
  - simulation of random variables and stochastic processes
- Data analysis
  - realisation of data ascertainment
  - preparation of data and results