

Announcement WiSe 2018/19

Lecture in Insurance Mathematics

Actuarial Risk Management

Prof. Dr. Peter Hieber

Area: / Modulnr.: Insurance Mathematics / MA5437

Course Structure: Lecture: 2h Exercises: 2h

Content: This course covers the risk management of insurance products, with a focus on the stochastic modeling of the main risk drivers. The course introduces the basic financial (e.g. Black-Scholes, Lévy models) and mortality models (e.g. intensity models, Lee-Carter) and discusses their main properties. The models are used to value insurance products (e.g. Variable Annuities) and to assess the risks of these products, applying to real actuarial and financial data. Aspects of risk assessment, risk management and model criticism are also covered.

Audience: MSc Mathematics, Mathematical Finance and Actuarial Science

Prerequisite: MA1401 (Introduction to Probability Theory/ recommended),
MA2003 (Measure and Integration/ recommended),
MA2409 (Probability Theory/ recommended)

Literature: **M. Denuit; J. Dhaene; M. Goovaerts; R. Kaas (2005):** Actuarial Theory for Dependent Risks: Measures, Orders and Models, John Wiley & Sons
R. Eisen; P. Zweifel (2012): Insurance Economics, Springer

Certificate: Exam, 6 CP

Location and Time: Friday, 10:15 – 11:45

Exercises: Group 1: Thursday, 16:15 – 17:45 (rooms see TUMonline)
Group 2: Friday, 8:15 – 9:45 (rooms see TUMonline)