

Announcement SoSe 2020

Lecture in Mathematical Finance

Actuarial Risk Theory

Prof. Dr. Matthias Scherer

Area: / Modulnr.: Insurance Mathematics / MA3442

Course Structure: Lecture: 2h Exercises: 1h

Content: The aim of this course is to understand and apply the basic notions, concepts, and methods of actuarial risk theory. We scrutinize light- and heavy-tailed claim size distributions and discuss Poisson and compound Poisson process theory as well as renewal theory.

Audience: MSc Mathematics, Mathematical Finance and Actuarial Science

Prerequisite: MA1401 (Introduction to Probability Theory/ recommended), MA2003 (Measure and Integration/ recommended), MA2409 (Probability Theory/ recommended), MA4405 (Stochastic Analysis, Stochastic Processes/ recommended).

Literature: **Mikosch, T. (2009):** Non-Life Insurance Mathematics, Vol. 2, Springer.
Asmussen, S.; Albrecher, H.-J. (2010): Ruin Probabilities, World Scientific.
Denuit, M.; Dhaene, J.; Gooeverts, M.; Kaas, R. (2005): Actuarial Theory for Dependent Risks: Measures, Orders and Models, Wiley.
Bühlmann, H. (1970): Mathematical Methods in Risk Theory, Springer.

Certificate: Exam, 5 ECTS

Location and Time: see TUMonline