Forschungsgruppe Finanz- und Versicherungsmathematik
TUM School of Computation, Information and Technology
Technische Universität München

Announcement WS 2025/2026

Lecture in Stochastic Processes

Basics of FIM

Prof. Dr. Rudi Zagst

Area: / Modulnr.: WI001287

Course Structure: Lecture: 1h Exercises: 1h

Content: This course introduces the basics of stochastic analysis in discrete and continuous time and the basic tools in probability theory to help better understanding the theory behind the stochastic calculus.

Audience: MSc Finance and Information Management

Literature:

Nicholas Bingham & Rüdiger Kiesel (2004): *Risk-neutral valuation: Pricing and Hedging of Financial Derivatives (2nd edition).* Springer-Verlag, London.
Richard Durrett (2019): *Probability: Theory and Examples (5th edition)*. Cambridge University Press, Cambridge.
Ludwig Fahrmeir (2016): *Statistik: Der Weg zur Datenanalyse (8. Auflage).* Springer-Verlag, Berlin-Heidelberg.
Bernt Øksendal (2003): *Stochastic Differential Equations: An Introduction with Applications (6th edition)***.** Springer-Verlag, Berlin Heidelberg.
Steven E. Shreve (2004): *Stochastic Calculus for Finance II: Continuous-Time Models.* Springer-Verlag, Berlin-Heidelberg.
Amanda Turner (2023): *Stochastic Finance: An introduction with examples.* Cambridge University Press, Cambridge.
Rudi Zagst (2002): *Interest-Rate Management.* Springer-Verlag, Berlin-Heidelberg

Certificate: Exam, 4 CP

Location/ Lecture/Exercises: see TUMonline