Zentrum Mathematik
Lehrstuhl für
für Finanzmathematik

Technische Universität München

Announcement SoSe 2015
Lecture in Mathematical Finance

Continuous Time Finance

Prof. Dr. Matthias Scherer

Area: / Modulnr.:   Mathematical Finance/ MA3702

Course Structure: Lecture: 2h   Exercises: 1h   Programming Exercises: 1h

Content: Stochastic processes, Itô calculus, Financial markets, Arbitrage and completeness, Pricing and hedging of contingent claims, Black-Scholes model and generalizations, Pricing of exotic options, Numerical methods. Implementation of financial models (Monte Carlo simulation, Fourier Pricing, etc.)

Audience: MSc Mathematical Finance and Actuarial Science

Prerequisite: MA3701 (Discrete Time Finance), MA4405 (Stochastic Analysis)

Literature: **N.H. Bingham und R. Kiesel (2004):** Risk-Neutral Valuation: Pricing and Hedging Financial Derivatives, Springer Finance
J. Hull, Prentice-Hall (2006): Options, Futures, and other Derivatives
M. Musiela und M. Rutkowski (2005):   Martingale Methods in Financial Modelling Vol. 36, Springer
S.E. Shreve (2004): Stochastic Calculus for Finance II: Continuous-Time Models, Springer Finance
R. Zagst (2002): Interest Rate Management, Springer Finance

Certificate: Exam, 6 CP

Location and Time: TUMonline

Exercises: TUMonline