Lehrstuhl für Finanzmathematik
Fakultät für Mathematik
Technische Universität München

Announcement SoSe 2017 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: see TUMonline

Exercises: see TUMonline