Lecturer: Prof Marek Rutkowski
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Lectures: Mon 4-5 pm, Wed 4-5 pm, Thu 4-5 pm
Consultation hours: Mon 3-4 pm, Wed 3-4 pm, Thu 3-4 pm
Tutorials: Mon 12-1 pm, Thu 1-2 pm, Thu 2-3 pm, Fri 2-3 pm
Tutors: Lucy Klinger (Mon), Desmond Ng (Thu), Leanne Dong (Fri)

Assessment tasks:
  Two assignments: 2 × 20 marks (20% of final mark)
  A1: Will be posted on Thursday, August 25 (Week 5) with submission by 5 pm on Monday, September 5 (Week 7)
  A2: Will be posted on Friday, October xx (Week xx) with submission by 5 pm on Monday, October xx (Week xx)
  Final examination: 80 marks (80% of final mark)
1 Securities Markets and Financial Derivatives

2 Single-Period Market Models
   - Two-State Single-Period Market Models
   - General Single-Period Market Models
   - Fundamental Theorem of Asset Pricing (Proof – MATH3975)

3 Multi-Period Market Models
   - Dynamic Information: Filtrations
   - Self-Financing Trading Strategies
   - Martingales (MATH3975)
   - Risk-Neutral Valuation Formula

4 The Cox-Ross-Rubinstein Binomial Model
   - Options of European Style
   - Options of American Style
   - Game Options (MATH3975)

5 The Black-Scholes Model
Suggested readings (complementary textbooks):


Related undergraduate courses:

- MATH2070/2970: Optimisation and Financial Mathematics
- STAT3011/3911: Stochastic Processes and Time Series

Related honours courses:

- MSH2: Probability Theory
- MSH7: Introduction to Stochastic Calculus with Applications
- AMH4: Advanced Option Pricing
- AMH7: Backward Stochastic Differential Equations with Applications