

# Course Materials

- ① Weekly Slides
- ② Weekly Additional Examples
- ③ Assignments ( $\times 4$ )
- ④ Mid-term revision question pack (S5)
- ⑤ End-term revision question pack (S9)
- ⑥ Sample Final Exam paper

# Reference Text

The course materials is self-contained.

For additional reading:

- ① Steven Shreve (2004): "Stochastic Calculus for Finance I & II"
- ② Martin Baxter and Andrew Rennie (2006): "Financial Calculus: An Introduction to Derivative Pricing"
- ③ Mark Joshi (2008): "The Concepts and Practice of Mathematical Finance"
- ④ Tim Falcon Crack (2014): "Basic Black-Scholes: Option Pricing and Trading"

# Components

- Class Participation: 10% (individual)
- Project: 20% (group)  
⇒ Form groups of 4-to-6 persons each.
- Assignments ( $\times 4$ ): 20% (individual)
- Final Exam: 50% (individual)

# Project — See Separate Documentation

Objective: use Python to implement part of the models covered in this course.

- ① Analytical option pricers
- ② Static replication of European payoffs
- ③ Dynamic hedging
- ④ Stochastic Volatility models
- ⑤ Calibration to market data