Financial Mathematics 2

Course Syllabus

Fall Term 2015 — SNU

Course Title	Financial Mathematics 2 (in English)
Course number	3341.452
Instructor	Gerald Trutnau
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Course homepage	http://www.math.snu.ac.kr/∼ trutnau/teachingFinance22015.html
Course Objective	The purpose of this course is to introduce the reader to the basic ideas and results of Financial Mathematics.
References	The main source for this lecture will be -Lamberton, Damien; Lapeyre, Bernard: *Introduction to stochastic calculus applied to finance*. Second edition. Chapman & Hall/CRC Financial Mathematics Series, Boca Raton, FL, 2008. Here are some additional references: -Baxter, Martin, Andrew Rennie: *Financial Calculus: An Introduction to Derivative Pricing*, Cambridge University Press, 1996. -Björk, Tamas: *Arbitrage Theory in Continuous Time*, Oxford University Press. -Elliott, Robert J.; Kopp, P. Ekkehard: *Mathematics of financial markets*. Second edition. Springer Finance. Springer-Verlag, New York, 2005. -Hull, John: *Options, Futures, and Other Derivatives*, 6th ed., Prentice Hall, 2006. -Karatzas, Ioannis and Shreve, Steven: *Methods of mathematical finance* - Springer, 1998. -Shreve, Steven E.: *Stochastic Calculus for finance I, II*, Springer, 2004. -Wilmott, Paul; Dewynne, Jeff; Howison, Sam: Option Pricing: Mathematical Models And Computation, Oxford Financial Press; 1994

Description We will follow the chapters of main textbook with supplementary material provided in the lecture (possibly also from the other references). Especially, the necessary probabilistic and measure theoretical background will be provided during the lecture (to be updated).

Tentative content We continue with chapter 5 of the textbook.

Teaching Method Lecture, exercises.

Evaluation - Attendance (10 % of final score).

- Assignment sheets (30 % of final score);

Students must solve exercises regularily, and will be given assignment sheets mostly every week.

- Midterm (7-8th week, 75 minutes, 30 % of final score);

- Final exam (14-15th week, 75 minutes, 30 % of final score);