



Instructor / Tutor: Assigned Euclid Faculty

QUANTITATIVE FINANCE (A)

- Credits: 3 US / 4.5 ECTS
 - Code: QFIN-401 (2697)
 - Revised: June 2009
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COURSE DESCRIPTION:

This course provides a comprehensive introduction to quantitative finance (i.e. advanced mathematics applied to the needs of the financial industry, both interest-based and Islamic).

Section 1 (review):

For a review of essential mathematics, students should consider starting with the following Teaching Company DVDs:

- Change and Motion: Calculus Made Clear, 2nd Edition
- What Are the Chances? Probability Made Clear
- Meaning from Data: Statistics Made Clear

Section 2:

The student should then review the following textbook:

- Options, Futures, and Other Derivatives with Derivagem CD (7th Edition) (by John Hull)

This text should be followed by:

- The Complete Guide to Capital Markets for Quantitative Professionals (by Alex Kuznetsov)

Section 3 (optional section – this is to be discussed with instructor):

The course then requires familiarity (not mastery) with the following texts:

Stochastic Calculus for Finance I

by Steven E. Shreve

Stochastic Calculus for Finance II

by Steven E. Shreve

Paul Wilmott Introduces Quantitative Finance

by Paul Wilmott

Frequently Asked Questions in Quantitative Finance

by Paul Wilmott

COURSE OBJECTIVES & LEARNING OUTCOME

At the end of this course, the student will understand the following concepts and be able to express them clearly, with the ability to show their interconnection:

- General concepts of QF
- QF tools used in Islamic Banking and Finance
- Calculus and Probability tools used in QF
- Concepts of Stochastic Calculus
- General understanding of Wilmott's FAQ

MAIN / REQUIRED TEXT(S) AND COURSEWARE:

See above for a list of required textbooks +

Please also consult your instructor to see what recent MP3 lectures or publication may be added as required assignments.

PAPER AND FINAL GRADE:

This course requires the presentation of one 6-14 page paper on a theme of the student's choice based on a particular lecture or section in the assigned resources listed above. The theme must be discussed with and approved by the instructor.

- ✓ 30% of the final grade is based on the paper.
 - ✓ 70% of the final grade is based on the final oral exam / closing interview
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STANDARD EUCLID GRADING SCALE:

▪ A+	4.00
▪ A	4.00
▪ A-	3.84
▪ B+	3.33
▪ B	3.00
▪ B-	2.67
▪ C+	2.33
▪ C	2.00
▪ C -	1.67
▪ D+	1.33
▪ D	1.00
▪ F	0.00
