



## APPLIED MATHEMATICS 481 "INTRODUCTION TO MATHEMATICAL FINANCE"

**Calendar Description:** H(3-1T)

Introduction to financial markets and derivatives, asset price random walks, Black-Scholes option pricing model, American options and other generalizations.

**Prerequisite:** Mathematics 323 and 353.

### *Syllabus*

<u>Topics</u>	<u>Number of Hours</u>
Introduction to financial markets: forwards, futures, options, bonds, other derivatives.	2
Asset price random walks	8
Hedging and arbitrage	4
Black-Scholes equation and its solution	8
Generalizations of Black-Scholes	8
American options	6
<b>TOTAL HOURS</b>	<b>36</b>

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