

## **FINA 4320/FINA 6320: DERIVATIVE SECURITY MARKETS**

The markets for futures, options, and other derivative securities. The mechanics of trading, regulation, pricing, hedging, and risk management using derivatives.

*The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.*

### **Fall 2008:**

Terry College of Business

University of Georgia

Section I: MWF, 9:05 – 9:55, SLC 214.

Section II: MWF, 11:15 – 12:05, Sanford 112.

**Instructor:** Ryan McKeon  
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**Course Web Site:** [webct.uga.edu](http://webct.uga.edu)  
**Office Hours:** By appointment

*For e-mails regarding queries on course material or requests for meetings please use my uga.edu e-mail address. I check this more frequently than WEBCT e-mail.*

*However, you should make a habit of checking WEBCT regularly as I will use the e-mail facility there to send general instructions and comments to the class.*

### **Course Objective:**

This course is an introduction to derivative security markets including call and put options, futures and forward contracts, and swaps. Topics include, but are not restricted to, the economic role of derivatives, valuation of derivatives, derivative trading strategies and the management of corporate risk with derivatives. The aim of the course is for students to end up comfortable with the use and valuation of a variety of derivative products.

### **Recommended Texts:**

*Options, Futures and other Derivatives*, 6<sup>th</sup> Edition, by John C. Hull, 2006, Pearson Education.

*A variety of relevant books can be found on the 5<sup>th</sup> floor of the main library, for example in section HG6024.*

### **Additional Recommended Reading:**

*When Genius Failed: The Rise and Fall of Long-Term Capital Management*, Roger Lowenstein, 2001, Random House Trade.

*F.I.A.S.C.O.: The Inside Story of a Wall Street Trader*, Frank Partnoy, 1999, Penguin Books.

*Covered Calls and Naked Puts*, Ronald Groenke, 2004, Keller Publishing.

*The Black Swan: The Impact of the Highly Improbable*, Nassim Nicholas Taleb, 2007, Random House.

*McMillan on Options*, Lawrence G. McMillan, 2004, Wiley.

*Introduction to the Mathematics of Financial Derivatives*, Salih N. Neftci, 2000, Academic Press.

**Some websites of relevance:**

<http://www.cboe.com/>

<http://www.cbot.com/>

<http://www.isda.org/>

**Prerequisites:** FINA 4310 (Survey of Investments) and FINA 3000 (Financial Management).

A basic familiarity with spreadsheets such as Excel is assumed.

**Other Items:**

You will need a capable financial or scientific calculator.

**Absences:** I do not keep track of attendance during the semester, but frequent absences will hurt your chances of good scores on tests and the exam.

Furthermore, my office hours should be used for questions related to problems you are working from the book, or questions which have arisen as you reviewed your class notes or the book. Please do not use office hours to ask questions related to material which has already been discussed or answered in class. Office hours are not meant as a substitute for attending class.

I am happy to assist students, but please ensure that you first consult the syllabus and your notes when questions arise.

Reading assignments:

Articles will be posted to WEBCT for reading from current periodicals or journals. These will provide material for the exam/quizzes. These readings may not be specifically addressed in class, although questions or discussion are welcome if desired.

Project:

One project is assigned for the course. The due date for this project is midnight of Friday, December 5<sup>th</sup>.

The project will involve an investment game where each student will have a mock-portfolio to manage. The trading will be web-based. Details will follow. Note that there is a fee from the trading game firm.

Each student should prepare a written report on their trading activities including examples of the trades he/she traded, the reasons for implementing these trades and the final outcome. Grades will be based on the clarity of the report and not on the results achieved during the trading game (students may find that losing a lot of “money” on the game is very educational! :)

*FINA 6320 students will be given a special project to do by the end of the semester. Details to follow.*

**Exam/Tests:** Tests and the final Exams will be closed book but I will provide certain complex equations for reference on the exam. Exams and tests will only be administered at the assigned times, and a missed exam or test will carry a grade of zero unless explicitly excused by a physician or the Dean of students. Truly exceptional circumstances should be discussed with me prior to the exam.

Although students who attend class regularly, pay attention and ask good questions may be able to identify sections of work which are of greater or lesser relative importance than others, officially the content for test and exams is anything written in the Hull textbook, any readings posted on WEBCT, and anything discussed during class time.

**Class tests:** Three in-class tests will be given during the semester. These tests are scheduled for 22 September, 20 October and 17 November. All tests are scheduled for Monday. My deadline for replying to questions submitted via e-mail regarding tests is 5:00 PM on the Sunday the day before the test. You may submit questions after that time, but I do not guarantee a response if after that deadline.

**Assignments:** Assignments will be given during the course. Assignments are an opportunity for you to explore certain areas in greater detail than covered in class. Details will follow.

**Final Examination:** The final examination will be on Friday 12<sup>th</sup> December from 12:00 to 3:00 pm for Section II and Monday 15<sup>th</sup> December from 8:00 to 11:00 am for Section I.

***\*\*\*The final exam is a compulsory component of the final grade and must be written by all students regardless of your performance during the semester. If any circumstances arise which would interfere with your writing the exam on the assigned date you should contact me immediately to resolve the situation.***

**Grade Determination:** Final grade assignments will depend upon your overall performance and will be determined as objectively as possible based on the following weights:

Class Tests	25 % weighting on each of your <u>two best</u> scores of the three
Final Exam	30 %
Assignments	10%
Stocktrack Project	10 %

*Your final grade will be determined solely on your scores in the above components. Regrettably, no points can be awarded for effort or amount of time spent studying.*

The following will be used as a guideline for final grades:

92.0% - 100%	A
90.0% - 91.9%	A-
88.0% - 89.9%	B+

82.0% – 87.9%	B
80.0% - 81.9%	B-
78.0% - 79.9%	C+
72.0% - 77.9%	C
70.0% – 71.9%	C-
60.0% - 69.9%	D
0.0% – 59.9%	F

**Honor code:**

All academic work must meet the standards contained in "A Culture of Honesty." Students are responsible for informing themselves about those standards before performing any academic work. While I strongly encourage discussion with classmates, all work for grades should be completed individually.

**Course Outline:**

**(The Powerpoint notes which accompany the chapters in the Hull book can be downloaded from John Hull's website at <http://www.rotman.utoronto.ca/~hull/>)**

**List/Order of topics:**

Introduction/Overview (Hull 1)  
 Structure of Futures markets (Hull 2)  
 Structure of Options Markets (Hull 8)  
 Principles of Option Pricing (Hull 9)  
 Option Types, Strategies & Applications (Hull 10 and 22)  
 Binomial Option Pricing Model (Hull 11)  
 Stock price dynamics and Black-Scholes Model (Hull 12 and 13)  
 Black-Scholes Model (Hull 13)  
 Option "Greeks" (Hull 15)  
 Volatility smile (Hull 16)  
 Volatility estimation (Hull 19)  
 Options on Stock Indices, Currencies, and Futures (Hull 14)  
 Futures hedging (Hull 3)  
 Forward and Futures pricing (Hull 5)  
 Interest Rate Futures (Hull 6)  
 Swaps (Hull 7)  
 Credit risk (Hull 20)  
 Credit Derivatives (Hull 21)  
 Financial Risk Management (Hull 18)  
 Topics from chapters 23-31 as time permits

**Important Dates:**

**August:**

**September:**

1<sup>st</sup>: LABOR DAY – NO CLASS  
 22<sup>nd</sup>: TEST 1

**October:**

10<sup>th</sup> : NO CLASS  
20<sup>th</sup> : **TEST 2**  
31<sup>st</sup>: FALL BREAK – NO CLASS

**November:**

17<sup>th</sup>: **TEST 3**  
24<sup>th</sup> – 28<sup>th</sup>: THANKSGIVING – NO CLASSES

**December:**

5<sup>th</sup>: Stocktrak project writeup due – e-mail over WEBCT by 11:59 PM  
FINA 6320 project writeup due – e-mail over WEBCT by 11:59 PM  
9<sup>th</sup>: Friday Schedule. Wrap-up/ Review  
12<sup>th</sup>/15<sup>th</sup>: ***FINAL EXAM***