FIN450 Derivatives Syllabus

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Office Hours: TTh 10:50-12:20 or by appointment

Course Description

Overview:

This course introduces forwards, futures, swaps, options and CDS to you. Those are financial tools used extensively by hedge funds, mutual funds, firms, institutional investors and experienced individual investors.

Learning Outcome:

Upon finishing the course I expect you to be able to:

1. use futures for long hedge and short hedge.
2. show how future prices are determined.
3. show the price bounds on options.
4. trade options and know when to use what strategies.
5. talk about how swaps and CDS work and how their prices are determined.
6. use binomial tree and Black-Scholes model to price options
7. talk about the meaning of the Greek letters and how to use them.

Textbook Required:


Websites Strongly Recommended:

General Finance Sites:
http://finance.yahoo.com/

Chart School and Technical Websites:
http://stockcharts.com/education/

Grading:
There will be 3 exams. They are equal weighted and 70% of your grades. The exams will be in terms of problem type of questions. Final is cumulative. Exam dates are

Exam 1, 02/16/2010, Tuesday  
Exam 2, 03/25/2009, Thursday  
Final, 05/11/2010, 12:00–3:00 P.M. Tuesday

Homework assignments are 20% of your grade. All homework assignments will be counted. **Answers should be typed unless I instruct not to.** You can have one or two teammates and work on the problems together and submit one set of answer in hardcopy. I strongly suggest you take the time and do the questions right.

Trading simulation is 10% of your grade. You need to find one or two teammates and trade together with your teammates. Each team needs just one account. You are graded based on your performance and number of trades. The grades are more towards your effort. I am expecting eight well thought trades each week. Your number of trades needs to be at least 100 and well distributed across time to avoid penalty. We use investopedia.com for simulation.

You need to hand in your trading history each two weeks. The first is due by 02/04/2010, Thursday and then one report will be due in each two weeks. Due dates are 02/18, 03/04, 03/18, 04/01, 04/15, 04/29. They are all Thursdays. The simulation ends on 04/29. You need to record why and what you are buying and selling. You should discuss the macro environment and company specific news.

Passive trading is not suggested. It will be penalized and I judge the word “passive” by my feelings. Your username at investopedia.com should be your YourTeamName following by team members initials separated by hyphens.

For example, if the team has three members and they are Dayong Huang, Bill Brown and Daniel Winkler, and the team decides to call herself Scorpion, then the username is Scorpion-dhuang-bbrown-dwinker.

For all tests and homework assignments, you need to show your steps and all the details.

**Makeup Exam Policy:**

*No makeup exam.* Makeup will only be provided under extreme situations such as being hospitalized with documented proof from the university.

**Attendance Policy:**

It will be extremely hard to follow if you miss classes because this class is very technical and mathematical. I will keep your attendance record. **For each three classes you miss, your grade will be lowered by one grade, meaning you go from B- to C+ for each three classes you miss.** This applies for moderate amount of absences. If absences are
substantial and they are beyond a point that I don’t even want to count, Missing classes = Fail.

Choose a seat you want to sit on the second day of the class and that helps me to learn your name with my seating chart.

Grading Scale will be as follows:

- 98%-100%    = A+
- 92%-97.9%    = A
- 90%-91.9%    = A-
- 88%-89.9%    = B+
- 82%-87.9%    = B
- 80%-81.9%    = B-
- 78%-79.9%    = C+
- 72%-77.9%    = C
- 70%-71.9%    = C-
- 68%-69.9%    = D+
- 62%-67.9%    = D
- 60%-61.9%    = D-
- Below 60%     = F

Note that a grade of Ds is not an option for a graduate student by the policy of the graduate school.

Expectation:

I expect you to:
1. Show up.
2. Read book before you come to class and be prepared to ask and answer questions.
3. Spend 9 hours outside class on the subject each week.
4. See me ASAP if you have problems.
5. Work hard and show respect to class.

The university and Bryan School has detailed code on student conduct. See the following links:

http://studentconduct.uncg.edu/policy/code/
www.uncg.edu/bae/faculty_student_guidelines.pdf

Academic Integrity Policy:

The UNCG community subscribes to the following fundamental principles of academic integrity: honesty; trust; fairness; respect; responsibility. All violations of the Policy are violations of the principle of honesty but may also create questions related to trust, fairness, respect, and responsibility. The below listed violations of the Academic Integrity
Policy are typical, but not exhaustive, examples of the acts that constitute breaches of the Policy.

Cheating: Intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise.

Plagiarism: Intentionally or knowingly representing the words of another, as one's own in any academic exercise.

Misuse of Academic Resources: The intentional use, misuse or alterations of University materials or resources so as to make them inaccessible to other users.

Falsification: Intentional and unauthorized falsification or invention of any information or citation in an academic exercise.

Facilitating academic dishonesty: Intentionally or knowingly helping or attempting to help another to commit an act of academic dishonesty.

The minimum sanction of violating the policy is a grade of “Fail” for the class.

Tentative schedule

Hedging using futures Ch3
Interest rates Ch4
Determination of forward and futures prices Ch5

Mechanics of options markets Ch8
Properties of stock options Ch9
Trading Strategies involving options Ch10

Interest rate futures Ch6
Swaps Ch7
Binomial trees and Black Scholes Ch11&12
Greek letters Ch15