

FIN450 Derivatives Syllabus

Instructor: Dr. Dayong Huang
Room: 338 Bryan
Phone: 336-256-0124
Email: d_huang@uncg.edu
Office Hours: Tuesday 3:30 – 4:45 Thursday 12:30 – 1:45 p.m. or by appointment via Zoom at <https://uncg.zoom.us/j/5093266695>. Please email first to confirm.

Graduate Assistant: Derrick Johnson. djjohn23@uncg.edu

Course Description

Overview:

This course introduces basic concept of futures, swaps and options that are frequently used by institutional investors and experienced individual investors for investment and speculation.

Learning Outcome:

Upon finishing the course students will:

- develop their knowledge of meanings of various futures contracts.
- examine how prices of futures contracts are determined.
- develop their knowledge of meanings of various financial options.
- analyze price bounds of financial options.
- analyze options trading strategies.
- analyze how swaps can be used for risk management.
- price options using multiple-step binomial tree models and Black-Scholes model.
- analyze option properties using Greek letters.

Textbook Required:

Fundamentals of Options, Futures and Other Derivatives, John Hull, 9th edition, 2017, Pearson Prentice Hall.

Websites Strongly Recommended:

General Finance Sites:

<http://finance.yahoo.com/>

Chart School and Technical Websites:

<http://stockcharts.com/education/>

ZOOM Meeting Information

<https://uncg.zoom.us/j/96198521647?pwd=cFcbDk2UEJSaURrS0UvTzNrM0VlQT09>

Meeting ID: 961 9852 1647

Passcode: 7a535k

One tap mobile

+16465588656,,96198521647#,,,,,0#,,033226# US (New York)

+13017158592,,96198521647#,,,,,0#,,033226# US (Germantown)

Dial by your location

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+1 312 626 6799 US (Chicago)

+1 669 900 9128 US (San Jose)

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

Meeting ID: 961 9852 1647

Passcode: 033226

Find your local number: <https://uncg.zoom.us/u/af6MnIqWk>

Grading:

Here is the breakdown of the components

Exam: 60%

Simulation: 10%

Homework: 20%

Class Discussion: 10%

There will be 3 exams. They are equal weighted and 60% of your grades. The exams will be in terms of problem type of questions. Final is cumulative. Exam dates are

Exam 1, 09/17/2020, Thursday

Exam 2, 10/29/2020, Thursday

Exam 3, 12/05/2020, 3:30-6:30 Saturday

Homework assignments

- 1) All homework assignments will be counted.
- 2) Each student submits his/her own answers. It is individual
- 3) Plagiarism in homework receives fail for the class.
- 4) Show your steps and all the details.
- 5) Circle the key numbers.

Trading simulation

- 1) Each team can have up to 1 to 2 students. Your team is graded based on your performance and number of trades. The grades are more towards your effort.
- 2) I am expecting two well thought trades each week. Your number of trades needs to be at least 60 and well distributed across time to avoid penalty.
- 3) Some of the trades must be options trades.
- 4) We use investopedia.com for simulation.
- 5) You need to hand in your trading history twice, one on 10/01/2020, and the other on 11/19/2020.
- 6) You may be asked to summarize and present your trading to the class and show us why you are buying or selling a particular stock or options.
- 7) Print out the summary of your trading from investopedia.
- 8) Fill out the following table for at least 10 of your trades. You may want to redo this table.

Price	
PE	
ROA	
ROE	
Paste MACD and stochastic figure here (from Yahoo Finance)	I need to see one-year daily chart, with MACD and slow stochastics, and 50 day and 200 day exponential moving averages.
Other Comments (Important)	

Class participation and Discussions

- 1). It is based on the quality of your comments in class. Of course, no comments, no grade.

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. Your grade will be lowered if you miss a class. Missing classes leads to 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:

92%-100%	= 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:

- Show up.
- Read book before you come to class and be prepared to ask and answer questions.
- Spend 9 hours outside class on the subject each week.
- See me ASAP if you have problems.
- Work hard and show respect to class.

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

<https://sa.uncg.edu/handbook/student-code-of-conduct/>

<https://bryan.uncg.edu/wp-content/uploads/2017/08/Faculty-and-Student-Guidelines-2018-2019.pdf>

Tentative schedule

Hedging using futures Ch3

Interest rates Ch4
Determination of forward and futures prices Ch5

The credit crisis of 2007 Ch8
Mechanics of options markets Ch9
Properties of stock options Ch10
Trading Strategies involving options Ch11

Interest rate futures Ch6
Swaps Ch7
Binomial trees and Black Scholes Ch12&13
Greek letters Ch17

COVID19

As UNCG returns to face-to-face course offerings in fall 2020, the campus community must recognize and address concerns about physical and emotional safety. As such, all students, faculty, and staff are required to uphold UNCG's culture of care by actively engaging in behaviors that limit the spread of COVID-19. Such actions include, but are not limited to, the following:

- Wearing a face covering that covers both nose and mouth
- Observing social distance in the classroom
- Engaging in proper hand washing hygiene when possible
- Self-monitoring for symptoms of COVID-19
- Staying home if you are ill
- Complying with directions from health care providers or public health officials to quarantine or isolate if ill or exposed to someone who is ill.

Instructors will have seating charts for their classes. These are important for maintaining appropriate social distance during class and facilitating contact tracing should there be a confirmed case of COVID-19. Students must sit in their assigned seat at every class meeting and must not move furniture. Students should not eat or drink during class time.

A limited number of disposable masks will be available in classrooms for students who have forgotten theirs. Face coverings will also be available for purchase in the UNCG Campus Bookstore. Students who do not follow masking and social distancing requirements will be asked to put on a face covering or leave the classroom to retrieve one and only return when they follow these basic requirements to uphold standards of safety and care for the UNCG community. Once students have a face covering, they are permitted to re-enter a class already in progress. Repeated issues may result in conduct action. The course policies regarding attendance and academics remain in effect for partial or full absence from class due to lack of adherence with face covering and social distancing requirements.

For instances where the Office of Accessibility Resources and Services (OARS) has

granted accommodations regarding wearing face coverings, students should contact their instructors to develop appropriate alternatives to class participation and/or activities as needed. Instructors or the student may also contact OARS (336.334.5440) who, in consultation with Student Health Services, will review requests for accommodations.