

FINA 5220.002

Spring, 2021

Thursdays, 5:30 to 8:20 PM

Room: BLB 070

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Office hours by appointment,

via Zoom. (No office hours

during finals week).

Course Title: Theory and Application of Financial Derivatives

Required Text: Options, Futures, and other Derivatives by John C. Hull, 10th edition.

Recommended: Student Solution Manual for Options, Futures, and other Derivatives by John C. Hull, 10th edition.

Course Prerequisites

FINA 5170 and FINA 5210 or equivalents; ECON 1100 or ECON 5000 or equivalent; ACCT 2010 or ACCT 5020 or equivalent; MATH 1190 or equivalent.

Course Description

Theory, valuation and analysis of derivative securities; the use of options, futures and swaps in risk management; trading and hedging strategies.

Course Objectives

The central objective is the understanding and valuation of options, forward contracts, futures contracts and swaps. Students will learn the use of these derivatives for hedging. These will be some discussion of speculative trading strategies. Interest rate futures and the concepts of duration and convexity of bond portfolios will be discussed. Option valuation techniques will include the binomial model and the Black-Scholes model. Students will understand the use of delta and gamma hedging using options and shares of stock.

Homework

Homework consists of problems from the text. I do not grade homework. Your success on the exams, however, depends on your ability to do homework problems. I go over most of the homework problems in class.

Attendance Policy:

I advise you to attend class regularly. I do not alter your grade based upon attendance. I may, however, drop students for poor attendance. Also, in all of my classes there has been a high correlation between poor attendance and poor grades.

Exams

There are three exams. Exam 1 is worth 30%, exam 2 is worth 35% and the final exam is worth 35% of your grade. The final exam is **not** comprehensive. Please make your travel arrangements carefully as all exams are allowed on only the scheduled exam dates. Only in rare cases of real hardship will students be allowed to take makeup exams.

Grades

A, 90 - 100; B, 80 - 89; C, 70 - 79; D, 60 - 69; F, 0 - 59.

Course grades are posted by the university.

Notice for students with disabilities

The University of North Texas is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112 – The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans with Disabilities Act (ADA), pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

As a faculty member, I am required by law to provide reasonable accommodations to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty of their need for accommodation and in providing authorized documentation through designated administrative channels. Information regarding specific diagnostic criteria and policies for obtaining academic accommodations can be found at <http://www.unt.edu/oda/apply/index.html>. Also, you may visit the Office of Disability Accommodation in the University Union (room 321) or call them at (940) 565-4323. If you need an accommodation, please contact me as soon as possible but at the latest by the second week of class.

Academic dishonesty

Academic dishonesty is defined in the UNT Policy on Student Standards for Academic Integrity. Any suspected case of Academic Dishonesty will be handled in accordance with University policy and procedures. Possible academic penalties include a grade of “F” in the course. You will find the policy and procedures at <http://vpaa.unt.edu/academic-integrity.htm>

Student Perceptions of Teaching (SPOT)

The Student Perceptions of Teaching (SPOT) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. Your comments are an essential input in the process of continuous teaching improvement. So, please participate. The administration of the SPOT will begin a few weeks before the end of the semester and remain open for about two weeks.

Eagle Connect Account:

All students should activate and regularly check their Eagle Connect (e-mail) account. You may obtain information about Eagle Connect at <https://eagleconnect.unt.edu/>.

Face Coverings:

Face coverings are required in all UNT facilities. Students are expected to wear face coverings during this class. If you are unable to wear a face covering due to a disability, please contact the Office of Disability Access to request an accommodation. UNT face covering requirements are subject to change due to community health guidelines. Any changes will be communicated via the instructor.

Course Outline: A tentative course outline is given below.

<u>Date</u>	<u>Topic</u>	<u>Relevant Chapter in Text</u>
Jan. 14	Hedging Strategies Using Futures	Ch. 3
Jan. 21	Interest Rates	Ch. 4
Jan. 28	Forward and Future Prices	Ch. 5
Feb. 4	Review or overflow	
Feb. 11	Exam 1	
Feb 18.	Interest Rate Futures	Ch. 6
Feb. 25	Swaps	Ch. 7
Mar. 4	Stock Options	Ch. 11
Mar. 11	Trading Strategies using Options	Ch 12
Mar. 18	Review or overflow	
Mar. 25	Exam 2	
Apr. 1	Binomial Option Pricing Model	Ch. 13
Apr. 8	Black-Scholes Option Pricing Model	Ch. 15
Apr. 15	Options' Delta, Gamma, Theta, Vega and Rho	Ch. 19
Apr. 22	Review or overflow	
April 29	Final Exam (at 5:30 P.M. in usual classroom)	