



FINA 4210
Introduction to Derivatives
Fall 2025

NOTE: It is your responsibility to read, understand, and abide by all the course information and policies listed below. The course syllabus provides a general plan for the course; deviations may be necessary.

Instructor: Professor Nima Ebrahimi

Office Phone: (940) 565-2801

Office: BLB 304G

E-mail: Nima.Ebrahimi@unt.edu

Office Hours: By Appointment

Canvas Site: unt.instructure.com

Class Meeting Day & Time:

TuTh 11:00 PM – 12:20 PM

Class Location: BLB 060

Course Description:

This course is designed to show how active entities in financial markets insure themselves against the financial risks they are exposed to, using different financial derivatives. To achieve this goal, the course defines different financial derivatives (like forwards, futures, and options) and provides an explanation of the mechanics of the markets in which these assets are being traded, alongside the mathematical foundation of deriving prices of the financial instruments. Along the way, the course uses real-world cases and historical data from different financial markets, like the interest rate market and the commodity market, to show the necessity of using theoretical risk-hedging knowledge in the derivatives market.

Course Goals:

This course is designed to familiarize students with financial derivatives, including

futures and options, and to show the effective usage of these financial instruments to manage (hedge) financial risk in different markets.

Student Learning Objectives:

At the end of this semester, students should be able to:

- Understand the mechanics of different derivative markets (e.g., futures, options, etc.)
- Understand the concept of risk in financial markets
- Understand pricing of the financial instruments
- Understand how to hedge risk using financial derivatives

Course Material:

1. “Options, Futures, and Other Derivatives” by John C. Hull, 10th Edition, Pearson
2. Materials posted on Canvas: lecture slides, homework, etc.
3. A calculator – it should be able to compute the value of exponential and logarithm functions.

Course Schedule:

This course meets twice per week for a lecture. The course outline below should be viewed as the general framework within which we will work. The following outline will be adjusted as needed:

Chapter 1: Introduction

Chapter 2: Futures Markets

Chapter 3: Hedging Strategies Using Futures

Chapter 4: Interest Rates

Chapter 5: Determination of Forward and Futures Prices

Chapter 10: Mechanics of Options Markets

Chapter 11: Properties of Stock Options

Chapter 12: Trading Strategies Involving Options

Chapter 13: Binomial Trees

Chapter 15: The Black-Scholes-Merton Model

In general, we will follow the book's topic ordering; we will skip some of the book chapters because there is more important material to cover in this class.

Office Hours:

We will not have fixed and weekly office hours for this course. My experience shows that most of the students are busy with other classes and assignments, which prevent them from actively attending fixed office hours. Therefore, we will have office hours by appointment. You will contact me through email, we will find a time that works for both of us, and then I will have your questions answered during that time.

Communication:

There will be times during the term that I will want to communicate with you either individually or as a class. I will normally do this via email. All of you have UNT official email addresses. If you use another email address, such as a Gmail, Yahoo, or work account, for your primary email, you will need to forward your mail from the UNT official address to your main address. I will be using the list of email addresses as indicated on the Canvas class roster.

I will do my best to answer all emails within 24 hours, but there is no guarantee that this will be the case all the time. Therefore, you may not receive a response to emails sent within 24 hours before the assignment due date or the exam date. I strongly encourage advanced studying.

Grading:

The following are the guidelines for possible grades:

A: 90 - 100
B: 80 – 89
C: 70 – 79
D: 60 – 69
F: 0 – 59

Your final grade will be determined based on your performance in the following:

Homework	40
Attendance	10
Midterm Exam	20
Final Exam	30
Total	100

Exams:

Exams are closed-book. A calculator without the ability to transmit data is allowed – laptops, tablets, and cell phones cannot be used as a calculator. Further, you can bring a formula sheet (typed or handwritten) to the exams. The formula sheet should not exceed a one standard Letter-sized and double-sided page. You can fill it with anything you want. The letter grades will be calculated based on a 100-point scale.

The midterm and final exams are scheduled as follows:

- TBA
- TBA

I reserve the right to change the date of the midterm exam if needed.

There will be no make-up exams except for the final exam. If you miss the midterm exam, its grade portion will be cumulated to the grade portion of your final, indicating that your final will be worth 50 points out of 100 total points. **You must provide a notice at least one week in advance if you cannot take the midterm exam for valid reasons. The approval of the request is entirely at my discretion.** A make-up final exam will be given **only for family or medical emergencies.** Note that the make-up final exam will be different from the regular exam.

Homework:

There will be four problem sets, each worth 10 points out of the total 100 points, to be done individually. A PDF (typed, scanned, or photocopied) version of each homework should be electronically submitted through Canvas by the due date.

Class Attendance:

To succeed in a derivatives course, you should benefit from in-class exercises and discussions. Your attendance will be checked at the beginning of each class and counts for 10 points out of the total of 100 points. All absences, regardless of the reason, will count equally.

I understand that you may encounter a variety of situations where you would not be able to attend classes. Therefore, you will receive the full attendance score (10 out of 10) having up to FOUR absences. The remaining number of absences will be subtracted from 10 to compute your attendance score. For example, if you miss seven classes, you will receive a 7 out of 10 because of your fifth, sixth, and seventh absences. **Any student who is absent for ten or more classes, regardless of the reason or performance on exams or assignments, will receive an “F” for the class.**

University Policies

Attendance Policy:

Students are expected to attend class meetings regularly and to abide by the attendance policy established for the course. It is important that you communicate with the professor and the instructional team prior to being absent, so you, the professor, and the instructional team can discuss and mitigate the impact of the absence on your attainment of course learning goals. Please inform the professor and instructional team if you are unable to attend class meetings because you are ill, in mindfulness of the health and safety of everyone in our community. If you are experiencing any symptoms of COVID (https://www.cdc.gov/coronavirus/2019-ncov/symptoms_testing/symptoms.html) please seek medical attention from the Student Health and Wellness Center (940-565-2333 or askSHWC@unt.edu) or your health care provider PRIOR to coming to campus. UNT also requires you to contact the UNT COVID Team at COVID@unt.edu for guidance on actions to take due to symptoms, pending or positive test results, or potential exposure.

Academic Integrity:

The G. Brint Ryan College of Business takes academic honesty seriously. Ethics and integrity are important business values, essential to building trust and adhering to both professional and legal standards. Academic dishonesty destroys trust, damages the reputation and the value of the degree and is unacceptable.

According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions from admonition (a warning) to expulsion from the University.

Some of the most common examples of academic integrity violations include plagiarism or cheating, such as unauthorized assistance on examinations, homework, research papers or case analyses. Your work must be entirely your own. When working on assignments, you should not discuss your work with others unless approved by the course instructor. Group assignments should only be discussed with members assigned to your group, and all group members may be held accountable in some way for known academic integrity violations in a group assignment.

Another example of academic dishonesty relates to improper attribution. When preparing your assignments, you must cite all outside sources in the manner requested by your instructor. Copying or using material from any source prepared by or previously

submitted by others, at UNT or other institutions, or downloaded from the Internet, is plagiarism. Unless directed otherwise in an assignment, large-scale “cutting and pasting” from other sources, even if properly footnoted, is not appropriate. You should synthesize this material in your own words and provide a footnote. Your instructor will specify what materials, if any, may be used on the tests and exams.

Using materials other than those permitted, talking with other individuals during the exam, individuals exchanging information about an exam when one has taken the exam and the other has not, or copying or using material from another individual’s exam is academic dishonesty and will result in a meeting to discuss academic integrity violations and potentially issue sanctions mentioned above, and may result in ineligibility for academic scholarships. The use of online assistance, such as sites commonly used for finding homework solutions, group chat, cell phones, smart watches, and similar tools during exams, is not allowed for any reason unless specifically permitted. No portion of an exam may be copied or photographed without permission.

Students are expected to conduct themselves in a manner consistent with the University's status as an institution of higher education. A student is responsible for responding to a request to discuss suspected academic dishonesty when issued by an instructor or other University official. If a student fails to respond after a proper attempt at notification has been made, the University may take appropriate academic actions in the absence of the student’s participation

ADA Policy:

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one’s specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website (<https://disability.unt.edu/>). Academic Integrity

Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to

expulsion from the University. Academic dishonesty will be penalized and will most likely result in a grade of "F" for this course.

Student Perceptions of Teaching:

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the SPOT website (<http://spot.unt.edu/>) or email spot@unt.edu.