

# UNC Kenan-Flagler Business School

## MBA 783: Derivatives

### Course Contact Information

Instructor: Prof. Andreas Stathopoulos  
Office: McColl 4101  
Office Hours: By appointment (please email me to schedule)  
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Classroom: virtual (Zoom link: <https://kenan-flagler.zoom.us/j/91962967253>)  
Class Times: MW 2:00-3:20 pm

If you are having trouble, please come see me earlier rather than later. Please do not hesitate to email me.

### Course Description

MBA 783: Derivatives is an introductory course in derivative securities, with the primary goal of familiarizing students with the key features of the main types of derivatives (options, futures, forwards, swaps), the institutional details of the markets in which they are traded, their pricing, and their uses for speculation and hedging. The course should be useful both to students that aim for a career in investment management and to students that are interested in a career in corporate finance: in both contexts, the use of derivatives is widespread.

### Course Policies

You are responsible on exams **for all the material covered in the lectures (including slides and supplementary material discussed in class) and in the assignments.** There is significant lecture/assignment material not in the textbook and significant textbook material not in the lectures/assignments, but exams come from the lecture and assignments. The textbook is used solely as support material.

### Course Material

- Recommended textbooks (optional): “Fundamentals of Options and Futures Markets” [FOFM] by John C. Hull (the current edition is the 9th, but earlier editions are also useful), Pearson **OR** “Options, Futures and Other Derivatives” [OFOD] by John C. Hull (the current edition is the 10th, but earlier editions are also useful), Pearson. The latter book (OFOD) is somewhat more comprehensive, but requires more mathematical

sophistication than the former (FOFM). If you choose to purchase any of the two, your choice should be guided by how interested you are in taking advanced derivatives course in the future and by how mathematically sophisticated you are. For this introductory course, the material in the former book (FOFM) is sufficient. For more advanced derivatives courses that you may take in the future, the latter book (OFOD) may be more appropriate.

- Case pack (mandatory): The case pack contains the cases we will cover. The cases will involve written, graded case reports as class group assignments. The case pack can be purchased from Harvard Publishing at: <https://hbsp.harvard.edu/import/773268>
- Calculator: You will sometimes need to do calculations without access to an electronic device. For that reason, please make sure you have a calculator with you (that, at a minimum, has the natural log,  $e^x$  and  $x^y$  functions) that you know how to use.

## Grading

Your course grade is made up from the following components:

- Canvas quizzes: 10% or 20% (see below)
- Group assignments: 20% or 35% (see below)
- Final exam: 35% to 60%, depending on Canvas quiz and group assignment weights (see below)
- Participation: 10%

**I provide two grading weights for Canvas quizzes and group assignments and I will use the weighting that works to each student's advantage.** For example, for some students the optimal weighting would count Canvas quizzes as 10%, group assignments as 20% and the final exam as 60%, for other students the optimal weighting would count Canvas quizzes as 20%, group assignments as 20% and the final exam as 50%, for other students the optimal weighting would count Canvas quizzes as 10%, group assignments as 35% and the final exam as 45%, while for other students the optimal weighting would count Canvas quizzes as 20%, group assignments as 35% and the final exam as 35%. You don't need to do anything to use this policy - I will automatically use the method that works in your favor.

**Canvas quizzes** These quizzes are provided on Canvas and are automatically graded. There will be two such quizzes. Those are short quizzes – the estimated time for completion is about 15-20 minutes per quiz. Those quizzes will be due at the following dates:

- Quiz #1: Sunday, November 15, 11:59 pm
- Quiz #2: Sunday, November 29, 11:59 pm

**Group assignments** There will be two group assignments (cases); each assignment will take the form of a report that should be consistent with my guidelines. **The assignments are required to be done in study groups of (at most) 4 students.** If (for some legitimate reason) you prefer to work alone, I will consider your request to do so, after discussing the matter with you. **Turn in only one hard copy of each assignment per group.** Each write-up should include a cover sheet with the names of all the group members.

Even though form without substance is meaningless, please remember that form still matters. You should prepare all graded materials in a form that meets professional standards. These standards include but are not limited to dating all material, numbering the pages, labeling any graphs or tables you may have, and expressing yourself in a legible, concise and grammatically correct manner.

**Final exam** The final exam will be comprehensive, i.e., it will include all the material taught in the class. The final exam is designed to test your understanding of the material covered in class as well as your ability to apply the concepts in different set-ups.

## The Honor Code

It shall be the responsibility of every student at the University of North Carolina at Chapel Hill to obey and support the enforcement of the Honor Code. The Honor Code prohibits plagiarism, falsification or misrepresentation of an academic assignment, unauthorized collaboration on academic work, and cheating on examinations or other academic assignments. If you have questions about your responsibilities under the Honor Code, please consult the document *The Instrument of Student Judicial Governance*. If you have any questions about whether a proposed action is permitted in this class, you should ask me.

## Tentative Schedule

This tentative schedule is a list of class topics. Please remember that class material is the lectures and assignments; the correspondence to textbook chapters is provided for reference only.

Meeting #1: Monday, November 2  
Topics: Options markets  
Textbook: FOFM Chapters 1 and 9, OFOD Chapters 1 and 10

Meeting #2: Wednesday, November 4  
Topics: Options strategies  
Textbook: FOFM Chapter 11, OFOD Chapter 12

- Meeting #3: Monday, November 9  
 Topics: Options pricing relationships  
 Textbook: FOFM Chapter 10, OFOD Chapter 11
- Meeting #4: Wednesday, November 11  
 Topics: The binomial options pricing model  
 Textbook: FOFM Chapter 12, OFOD Chapter 13
- Meeting #5: Monday, November 16  
 Topics: The Black-Scholes model  
 Textbook: FOFM Chapter 13, OFOD Chapter 15
- Meeting #6: Wednesday, November 18  
 Topics: The “Greeks”  
 Textbook: FOFM Chapter 17, OFOD Chapter 19
- Meeting #7: Monday, November 23  
 Topics: Case #1: Principal-Protected Equity-Linked Note
- Meeting #8: Wednesday, November 25  
 Topics: Exotic options  
 Textbook: FOFM Chapter 22, OFOD Chapter 26
- Meeting #9: Monday, November 30  
 Topics: Forward and futures markets  
 Textbook: FOFM Chapters 2 and 3, OFOD Chapters 2 and 3
- Meeting #10: Wednesday, December 2  
 Topics: Forward and futures pricing  
 Textbook: FOFM Chapter 5, OFOD Chapter 5
- Meeting #11: Monday, December 7  
 Topics: Case #2: Pine Street Capital
- Meeting #12: Wednesday, December 9  
 Topics: Swaps  
 Textbook: FOFM Chapter 7, OFOD Chapter 7
- Meeting #13: Monday, December 14  
 Topics: Swaps (cont.)  
 Textbook: FOFM Chapter 7, OFOD Chapter 7

Meeting #14: Wednesday, December 16  
Topics: Review session

Final Exam: Friday, December 18