

MATH 420/620  
TR 12:30–1:45, PRN 325

Introduction to Mathematical Finance  
Spring 2022

Web Page: <http://sites.udel.edu/dedwards/classes/m620>  
(also referenced from QR code at end of document)

Instructor: Prof. D. A. Edwards      Office Hours: M 3:30–4:30 W 9:30–10:30 or by appointment  
x1871      dedwards@udel.edu

## **Introduction (3/1 Revision)**

Welcome to Introduction to Mathematical Finance! In this class we will use an integrated approach to learn both the theory and the practice of mathematical finance. The text for this course is *The Mathematics of Financial Derivatives: A Student Introduction*, by Wilmott, Howison, and Dewynne. In addition, I will also be lecturing from various other sources, so class attendance and participation is necessary for successful mastery of the material.

If you have any questions, contact me during my office hours or make an appointment. **Extra copies of handouts are available at the Web page listed above or referenced at the QR code at the end of the document.**

## **Technology Issues**

Important announcements (corrections to typographical errors, etc.) will be handled by e-mail. Also at the URL

<http://sites.udel.edu/dedwards/classes/suggest>

you will find an anonymous suggestion box.

## **Assessment**

Your grade for the course will be determined in two stages. First your *raw score* will be calculated as follows:

Each exam will count for  $1/3$  of your grade, and the homework counts for the remaining  $1/3$ .

Then each of the raw scores will be scaled to determine final grades.

## Exams

There will be two exams in the course: a take-home midterm (date listed on schedule) and an in-class final. Attached to the midterm will be a course evaluation form so that I may receive your suggestions for how the course could be improved. These forms will be seen only by me, so if you have comments that you wish the department to hear, please contact them directly.

When the exams are returned, they will have a numerical score and a letter grade on them. The numerical score is your score for the exam; *the letter grade is your grade for the course to that point, including all homework scores.*

## Homework

In most cases, homework will be distributed on Tuesdays, and it will be due at the beginning of class the following Tuesday. (The first homework assignment is attached to this sheet.) The homework will ideally cover material up through the day it is distributed. **ABSOLUTELY NO LATE ASSIGNMENTS WILL BE ACCEPTED!** If you must miss a due date because of University business, it is your responsibility to make sure the homework gets to me *before* the due date. However, I will drop your two lowest homework scores when computing your final average.

Though you may not copy directly from another's paper or use someone else's ideas (including online aids) as your own<sup>1</sup>, I encourage you to discuss assignments with your classmates. Model homework solutions will be posted on the Web after the assignment is due.

Assignments should be stapled, then folded like a book with the following information on the "front cover:"

Name  
Math 420/620—Edwards  
Homework Number  
Date

You will turn in your assignments this way so that your grade may be written on the inside, thus ensuring your privacy. The number of points assigned to each problem will be listed.

---

<sup>1</sup> For more details regarding academic dishonesty, see the Student Handbook (<http://www.udel.edu/stuguide/>).

## Tentative Schedule

**Note:** This is only a tentative schedule; there may be deviations from it.

week of February 8: Chapter 1, sections 3.1, 3.2, 6.3

February 8: Homework 1 distributed

week of February 15: Sections 1.2–1.5, 2.1, 2.2

week of February 22: Sections 2.1–2.3, 3.5

February 22: Homework 1 due; homework 2 distributed

week of March 1: Chapter 4, sections 3.3, 3.5–3.7, 3.10, chapter 4, 5.4–5.6

March 1: Homework 2 due; homework 3 distributed

week of March 8: Sections 3.3, 3.4, 3.9, 3.10, 5.4, 5.5

March 8: Homework 3 due; homework 4 distributed

week of March 15: Sections 3.3, 6.2

March 15: Homework 4 due; homework 5 distributed

week of March 22: Sections 6.2, chapter 11, sections 13.1, 13.2, 14.1, 14.2, 14.5, 15.1, 15.2

**March 22: No in-person meeting: prerecorded video to be distributed**

March 24: Homework 5 due; homework 6 distributed

**week of March 28: Spring break**

week of April 5: Chapter 7, sections 10.1, 10.2, 11.6, 15.1, 15.2

**April 5: Midterm distributed**

**April 6: Midterm due**

week of April 12: Sections 10.1–10.5

April 12: Homework 6 due; homework 7 distributed

week of April 19: Sections 10.3–10.5, 17.1–17.5

April 19: Homework 7 due; homework 8 distributed

week of April 26: Sections 17.4–17.6, 17.8–17.9.2

April 26: Homework 8 due; homework 9 distributed

week of May 3: Sections 17.9.1, 17.9.2, risk/reward

May 3: Homework 9 due; homework 10 distributed

week of May 10: risk/reward, portfolio theory, value at risk

May 10: Homework 10 due; homework 11 distributed

May 17: value at risk, review

May 17: Homework 11 due; supplemental study material distributed

Course Web Page:

