# Corporate Finance Finance 100 The Wharton School, University of Pennsylvania Spring 2023

Chaojun Wang

Office Hours: Mondays 6:30 - 7:30 PM Eastern Time from January 16 to

 $March\ 3$ 

William Diamond

Office Hours: Mondays 6:30 - 7:30 PM Eastern Time from March 13 to April

26

### Course Description

Finance 100 presents the basic tools of finance and forms the foundation for all elective finance courses. The concepts developed in Finance 100 form the foundation for all elective finance courses. The class will teach you how to account for the value of cash flows in the present and in the future, how to account for the riskiness of cash flows, and how to make decisions using these tools in the real world.

We will cover examples both from personal finance (Should I get a mortgage? How much should I save for retirement?) and that you may see in the work place. (How much is a company worth? What projects should my firm invest in?)

The main topics covered include (1) the time value of money and the net present value rule; (2) capital budgeting decisions; (3) valuation of bonds and stocks; (4) uncertainty and the tradeoff between risk and return; (5) corporate financing decisions; and (6) options and derivatives.

#### Exam Schedule:

• First Exam: February 15, in class.

• Second Exam: April 3, in class.

• Third Exam: April 26, in class.

### Piazza

### https://piazza.com/upenn/spring2023/fnce100

Piazza is our centralized electronic platform for *all* course material and course-related Q&As. (1) You are strongly encouraged to discuss and

answer other students' questions on Piazza—Discussing among peers is a great additional way to learn than simply getting answers from the TA. (2) For questions that you would like to direct to instructors (including TAs) only, you can use the feature "visible to instructors only" on Piazza. (3) Emails or text messages sent to a personal email address or a cell phone of a TA or an instructor cannot be replied.

## Teaching Assistants

Martin Vladyka martinvl@wharton.upenn.edu Ana Izecksohn Moreira anaizec@wharton.upenn.edu Bailey Greenwald baileygr@sas.upenn.edu Sejin Park spark25@wharton.upenn.edu TBD

We are very lucky to have this group of teaching assistants. We selected them based both on their understanding of the subject matter and their ability to communicate clearly and interact with their peers. They all received A+ grades in previous versions of the course. They are an excellent resource for learning the material in this class!! Weekly TA office hours will be scheduled shortly.

#### Course Material

- Required: Course notes/slides, links to relevant articles, and practice exam questions available on Piazza. Because some students sometimes have trouble registering for Canvas, we have decided to post material on Piazza where we are able to register students ourselves.
- Recommended: Corporate Finance: The Core by Berk and DeMarzo (old editions of this book are fine, as is sharing with a friend). Our course material tries to be self contained, but we also follow this book fairly closely for much of the course.
- A scientific or business calculator. It will be necessary for your calculator to have a  $x^y$  function. Some problem sets (and possibly parts of some exams) will require use of excel or some other simple statistical software.

#### **Problem Sets**

Problem sets are due on the day given in the syllabus. You will be rewarded full credit on the problem set if you have made a good-faith effort to answer all of the questions, and if you hand in the problem set on time. Late problem sets will not be accepted.

We strongly prefer that you hand problem sets in in person. If you happen to be absent and truly cannot get your problem set in to us in person, please post a Piazza message visibile to instructors only (including all the TAs, who will handle this) with your attached problem set and an explanation for your absence.

#### Lectures

If possible, please go through the lecture notes *before* each class. Please be on time, because we will take attendance and answer simple questions using Mentimeter, and often at the beginning of the lecture. Your Menti answer will not be scored. You are allowed (but discouraged) to be absent for up to three lectures without affecting your participation grade. Missing more than 3 lectures implies a loss of 5% of the participation grade.

### Grading

Grades will be based on three in class exams of equal value, which account for 80% of your total grade. Problem sets and participation/attendence/etiquette each count for 10%.

We may potentially curve the class up from our numerical score distribution to give more generous grades, but we will not "curve down" in the following sense. Any student who receives the equivalent of perfect on problem sets and participation together with 93 percent or better on tests will get at least an A. Similarly, 90 percent on tests (plus perfect elsewhere) gets at least an A-, 87 percent for B plus and so on (83 for B, 80 for B-, 77 for C+, 73 for C etc). Letter grades may be higher than this but will never be lower, although a 92 percent on tests plus perfect elsewhere for example can be an A-.

The participation/attendance/etiquette grade will be based on showing up to class regularly, being an active participant in the course (including doing the two excel spreadsheet assignments), and being professional in your interactions with the teaching assistants and professors. 5% of this grade will be for turning in the two in-class spreadsheet assignments, where any "good faith" attempt to do the entire assignment will receive a perfect score. This may be turned in up to to one week and two days after the associated class session. This will allow you to study for

exams if the assignment is not yet done.

We welcome questions during lecture, though there is no need to ask "fake" questions or to ask questions if you feel uncomfortable doing so in order to get a perfect participation grade. As long as you show up to lecture (attendance will be taken), do all the work, and provide some evidence of using the courses resources to learn in whatever way is most useful for you, you are likely to get a perfect participation grade. The "etiquette" portion of this grade we have introduced as a disincentive for students to aggressively ask for some sort of special treatment. In my experience the vast majority of students have been a pleasure to teach and only in extreme cases will this etiquette grade matter.

You are allowed three absences with no questions asked before your attendance grade suffers, at which point you will lose 5 % of your total grade.

Exam Notes/Grades You will be allowed three double-sided pages of notes you can bring to each exam.

Your lowest exam grade will be replaced by your score on the the best exam in the following sense. In order to allow for differences in the average score in exams, the option to drop a score will be computed using your ranking on the test and not numerical scores. For example, if you score 70th percentile on exam 1, 60th percentile on exam 2, and 65th percentile on exam 3, we will compute your grade as if you got whatever numerical score was 70th percentile on exam 2.

This option is only available to students who either have an excused absence for an exam or otherwise show up and attempt to take all exams. Because we drop the lowest exam score, we will not do any makeup exams unless explicitly required by school rules (which only apply to exams in finals period, which we do not have).

All regrade requests must be made in writing within one week of the day the exams are returned. Any exam submitted for regrading of a question can be subjected to a complete regrading. Your score may go up or down as a result of the regrade. We will put a regrade form on the class website that I will ask you to fill out in order to request a regrade.

### **Study Groups**

You are encouraged to work in groups on the problem sets, but you must hand in your own answers. It is also highly recommended that you regularly review the readings and class notes with your study group.

#### **Electronics**

We have decided to ban electronics (except using cell phones for mentimeter questions and attendence) during lectures to encourage everyone to pay attention and participate. If you need to use a computer and have an accommodation from the disabilities office you can show us to do so, that is totally fine.

#### Honor Code

Students are expected to respect the University of Pennsylvania's Code of Academic Integrity

(http://www.upenn.edu/academicintegrity/ai\_codeofacademicintegrity.html) and to behave with integrity in all aspects of the course. Students are forbidden to discuss exams during the period between sections to avoid giving later sections an unfair advantage. Violations of the honor code will be immediately reported to the administration.

### Course Schedule

Chapter denotes textbook readings. Please see the Files section of Piazza for additional material. Dates are approximate.

Date	Topic	Chapter	Assignment
1/11	Intro, Time value of money 1	Chapters 3,4	
1/16	MLK		
1/18	Time value of money 2	Chapters 4,5	
1/23	Fixed Income	Chapters 5,6	PS 1 due
1/25	Fixed Income	Chapters 5,6	
1/30	NPV vs. IRR	Chapters 7,8	
2/1	NPV vs. IRR	Chapters 7,8	PS 2 due
2/6	Capital Budgeting in Practice	Chapters 7,8	
2/8	Capital Budgeting in Practice	Chapters 7,8	
2/13	In-class Review Session		PS 3 due
2/15	In-class exam 1		
2/20	In-class Computer Exercise 1		
2/22	Equity	Chapter 9	
2/27	Risk and Return	Chapter 10	
3/1	Risk and Return	Chapter 10	PS 4 (small) due
	Spring Break		
3/13	Portfolio Choice	Chapter 11	
3/15	Portfolio Choice	Chapter 11	
3/20	Cost of Capital	Chapter 12	PS 5 due
3/22	Cost of Capital	Chapter 12	
3/27	In-class Computer Exercise 2		
3/29	In-class Review session		PS 6 Due
4/3	In-class exam 2		
4/5	Capital Structure	Chapter 14	
	Capital Structure	Chapters 14/15	
4/12	Capital Structure	Chapter 15,18	PS 7 Due
4/17	Derivatives	notes/slides only	
	Derivatives	notes/slides only	
4/24	In-class Review Session		PS 8 Due
4/26	In-class exam 3		