

FINC B8306 – Capital Markets & Investments – Du – Syllabus
 Professor Wenxin Du
 Email: wenxin.du@columbia.edu
 Office: Kravis 746
 Office hour by appointment

Updated: January 19, 2024

**B8306 – Capital Markets and Investments
 Spring 2024 Syllabus**

Class Times, Review Sessions, Midterm and End-of-Term Exams:

	<i>Section</i>	
	003	004
<i>Class Times</i>	TuTh 2:20-3:50 pm	TuTh 4:10-5:40 pm
<i>Classroom</i>	Geffen 520	
<i>Optional Review</i>	Friday 5:15-6:15 pm (first three weeks on Zoom, and then Kravis 490)	
<i>Midterm Exam</i>	Take-home during the midterm exam week	
<i>End-of-Term Exam</i>	Take-home during the final exam week	

I. Course Description:

This is a first course in capital markets and investments. The course has three principal goals:

1. To introduce the principles of investment and asset management. The majority of the class is concerned with the valuation of financial securities. The concepts covered are heavily used in personal and professional portfolio management, risk management, and corporate finance applications.
2. To introduce a set of tools and concepts that are key to understanding modern financial markets:
 - (a) arbitrage; (b) the term structure of interest rates; (c) portfolio theory, risk-control and diversification; (d) equilibrium asset pricing models and the CAPM; (e) efficient and inefficient markets; (f) performance evaluation; (g) pricing and hedging basic derivative securities (futures and options).
3. To provide sufficient background knowledge both for students seeking an overview of capital markets, and for those intending to pursue more advanced finance courses.

II. Course Materials:

Textbook: The *optional* textbook for the course is *Investments* by Bodie, Kane and Marcus (McGraw-Hill/Irwin), 10th edition or later (BKM).

Course Notes: Notes will be distributed in each class, and will also be available on Canvas.

Additional Readings: Relevant articles from industry, academia, and the popular press will be provided throughout the course.

III. Course Administration:

The course grade will be based on cases, problem sets, class participation and a midterm and final examination. The weights in your course grade are:

Cases	15%
Problem Sets	25%
Midterm Exam	20%
End of Term Exam	25%
Participation & Quizzes	15%

Cases: There will be three case assignments (Case 0 is intended as a review and will not be graded). Cases should be done in **groups of 3 members**. *Students are responsible for organizing these groups, and should add all group members to one of the “Assignment Groups” available on Canvas.* Each case will be distributed one week in advance and must be submitted by **12 pm on the due date**. Cases and solutions will be available on Canvas. The two case grades are weighted equally in your course grades. Because case solutions are discussed in class, **late cases cannot be accepted**.

Problem Sets: There will be six problem sets. (Problem Set 0 is not graded). Your worst problem set grade is thrown out – that is, only the highest 4 grades count. Problem sets should be done with the same 3-member group as the cases. Students are responsible for organizing these groups. Each assignment will be distributed at least one week in advance and is due by **12 pm on the due date**. Problem Sets and solutions will be available on Canvas. Although grades will be assigned to five assignments, only your highest four grades will count towards your course grade. **Late problem sets cannot be accepted**.

Class Participation: You will gain points by regularly attending class, being prepared, answering questions, asking questions, and generally by providing positive externalities to the other members of the class. You lose points by not coming to class, not participating in the class, not being prepared, and particularly by distracting or disruptive behavior.

Weekly Canvas Quizzes: Each week, students must individually take a short quiz on Canvas between Thursday at 6pm and the following Tuesday at 8am. Each quiz consists three or four review questions based on the week’s lectures and readings. Quizzes must be taken individually. Any books, references, computing or calculating equipment may be used. Quiz scores count toward the participation component of your grade. Solutions will be posted soon after quizzes are due. Just taking a quiz (and even scoring a zero) will still get you over half of the credit for the quiz. Not taking a quiz gets you zero credit.

Examination: Any books, references, computing or calculating equipment may be used. The midterm exam will be electronic and can be taken during the midterm exam week. The final exam will be electronic and can be taken during the final exam week. The exact timing of the midterm and final will be announced in class.

Generative AI Policy: Students in this course may only use Generative AI tools, such as ChatGPT, for idea generation and must include a citation describing any usage. Using these tools to generate responses to assignments violates CBS’s Honor Code, and I will report suspected instances of plagiarism. Please contact me if you have any questions about this policy.

IV. Review Sessions and Office Hours:

The teaching assistant for the course is Nanyu Chen (CBS PhD student): NChen25@gsb.columbia.edu. Weekly reviews will be on Friday at 5:15-6:15 pm. The first three weeks of reviews will be on Zoom (<https://gsb-columbia-edu.zoom.us/j/8994918069>), and then the weekly reviews will be held in-person in Kravis 490. These sessions are completely optional, and no new material will be covered. In addition to the weekly review sessions, we will conduct multiple review sessions prior to the midterm and final exams. You should feel free to contact the TA with any questions, especially regarding homework assignments.

There will generally be weekly review sessions run by TAs of other capital markets instructors. You can also attend these review sessions if Nanyu's review session time does not work for you. These review sessions are: Tuesday 12:30-1:30 pm in Geffen 390 (TA of Prof. Lancaster) and Friday 1:45-2:45 pm in Kravis 440 (TA of Prof. Schwarz).

This course is conceptually and analytically challenging, and will require a large time commitment from students. You are welcome to stop by my office hours to discuss specific questions on any of the course topics, or other interesting areas of finance and economics. In addition, if you have any concerns about the course, please let me know. You can email my faculty assistant Elisabeth Friedman, Elisabeth.friedman@gsb.columbia.edu to set up an appointment.

V. Switch Between Sections:

You may switch between the two sections on an occasional basis (no need to e-mail me). However, if we run out of seating and you are in a section other than your assigned section you must cede your seat to the students who are regularly enrolled in the section. Also keep in mind that the sections may occasionally proceed at different paces.

VI. Guest Speakers

We will have two guest speakers, Joe Mecane from Citadel and Ray Dalio from Bridgewater, to talk about real-world applications of the concepts we study in class. The guest lectures will take place outside regular class hours. The lectures will be recorded for students who have conflicts. Details will be confirmed.

Course Outline (*Tentative*)

This is a **tentative** schedule of topics that will be covered. Class dates and assignment are **preliminary** and subject to change.

Lecture Notes will be available on Canvas prior to each class.

CLS	DATE	SEC. [†]	TOPIC	BKM		ASSIGNMENT
				CHPTRS	ASSIGN	DUE DATE
1	23-Jan	Intro1	Overview, returns, role of markets	1, 2	Case 0	2-Feb Fri
2	25-Jan	Intro2	Stocks vs bonds, interest rates, and NPV	3, 14	PS 0	9-Feb Fri
3	30-Jan	Intro3	NPV, no-arbitrage, arbitrage in practice	3		
4	1-Feb	Intro4	Leverage and shorting	3		
5	6-Feb	FI1	Bond intro, zeros and spot rates	14	PS 1	16-Feb Fri
6	8-Feb	FI2	Pricing coupons bonds and bond yields	5, 15		
7	13-Feb	FI3	Term structure of interest rates, forwards, swaps	15	Case 1	22-Feb Th
8	15-Feb	FI4	Duration	16, 14		
9	20-Feb	FI5	Immunization and interest rate risk	14	PS 2	1-Mar Fri
10	22-Feb	FI6	Credit risk and corporate bonds	14		
11	27-Feb	EQ1	Intro to equities, performance and risk, valuation	5, 18		
12	29-Feb	EQ2	Valuation, historical returns and portfolio math	5, 6, 7	PS 3	22-Mar Fri
			Midterm Exam - Take-home during the week			
13	19-Mar	EQ3	Diversification and mean-variance efficiency	8, 9		
14	21-Mar	EQ4	Justifying the MVE portfolio and CAPM	9	PS 4	29-Mar Fri
15	26-Mar	EQ5	CAPM uses and the security market line	9		
16	28-Mar		no class (Joe Mecane 10 am on 3/22)			
17	2-Apr	EQ6	Estimating CAPM regressions, betas, and risk	10, 13	Case 2	11-Apr Th
18	4-Apr		no class (Ray Dalio 6 pm on 4/3)			
19	9-Apr	Eff1	Anomalies and multifactor models	4, 11, 24		
20	11-Apr	Eff2	Performance evaluation	11, 24		
21	16-Apr	Eff3	Mutual funds and market efficiency	20		
22	18-Apr	MS1	Managed Investment Vehicles	26, 27	PS 5	25-Apr Th
23	23-Apr	MS2	Taxes and Tax Strategies	12		
24	25-Apr	OPT1	Option introduction and payoffs			

[†] Key: FI=Fixed Income, EQ=Equities, Eff=Market Efficiency, MS=Market Structure, OPT=Options
 BKM refers to the textbook by Bodie, Kane and Marcus. You should at least skim the relevant chapters prior to the lecture.