

NEW YORK UNIVERSITY STERN SCHOOL OF BUSINESS  
**Debt Instruments and Markets (FINC-GB 3333 30)**  
Spring 2022, Tuesdays, 6:00-9:00pm  
Location: in-person, room TBD

**COURSE SYLLABUS**

Instructor: Bruce Tuckman  
Office Hours: Tuesdays, 4:15-5:45pm, KMC 9-92, or by appointment  
Email: [btuckman@stern.nyu.edu](mailto:btuckman@stern.nyu.edu)  
Teaching Assistant: TBD

**Course Overview**

This course

- gives an overview of current issues in fixed income markets;
- teaches the analytic tools required for pricing, hedging, and investing in fixed income securities;
- does a deep dive into selected securities and markets.

Classes will consist of lectures that present and illustrate foundational materials, along with breakout sessions to solve and discuss exercises and applications. Two graded problem sets and a final exam will determine the course grade.

The mathematical complexity of the course is limited to what sophisticated practitioners require to understand the analytics commonly used across fixed income markets. Students should be aware, however, that fixed income is inherently a quantitatively demanding subject.

**Course Meetings**

There are 12 class meetings on Tuesdays, from 6:00-9:00pm, from February 8 to May 3, 2022. Class does not meet on March 15, 2022, over Spring Break.

While classes will be recorded, students are *strongly encouraged* to attend class and to participate in the in-class breakout sessions. These sessions will help students solidify their understanding of the material and prepare them for the graded problem sets and final exam.

**Textbook**

Bruce Tuckman and Angel Serrat, Fixed Income Securities: Tools for Today's Markets, Third Edition, John Wiley & Sons, 2012.

## **Lecture Slides and Supplemental Material**

Lecture slides and supplemental materials (e.g., links to articles or papers) will be posted to Brightspace throughout the semester.

## **Problem Sets**

There will be two graded problem sets over the course of the exam. The first will be distributed on March 1 and be due on March 8. The second will be distributed on March 29 and be due April 5. The two problem sets will focus on material from the in-class breakout sessions from February 8 to March 1 and from March 8 to March 29, respectively.

Students may consult any materials they need in preparing their answers, and may work alone or in groups of two or three students. Students are on their honor, however, NOT to consult with any persons other than those in their respective work groups.

## **Final Exam**

There will be a final, in-class exam on May 3, 2022. The exam will focus on material from the two problem sets and from the in-class breakout sessions over the month of April.

## **Grading**

The semester grade will be determined by the two graded problem sets and the final exam, with weights of 35% on each problem set and of 30% on the final exam.

## Detailed Course Outline

### Overview of Fixed Income Markets

*Tues 8 Feb*

### Arbitrage, Discount Factors, Rates, and Spreads

Includes government bonds and interest rate swaps.

*Tues 15 Feb and Tues 22 Feb*

Textbook: Chapter 1, pp. 51-65; Chapter 2, pp. 69-82; Chapter 3, pp. 95-105  
(Optional reading: Chapter 16, pp. 435-450)

### Interest Rate Risk and Hedging

*Tues 1 Mar, Tues 8 Mar, and Tues 22 Mar*

There is no class during Spring Break, on Tues 15 Mar.

Textbook: Chapter 4, pp. 123-152; Chapter 5, pp. 153-162, 169; Chapter 6, pp. 171-180, 186-190

**Problem Set #1 will be distributed on Tues 1 Mar and due on Tues 8 Mar.**

### Fixed Income Asset Management

*Tues 29 Mar*

### Repo

*Tues 5 Apr*

Textbook: Chapter 12, pp. 327-336, 339-349

**Problem Set #2 will be distributed on Tues 29 Mar and due on Tues 5 Apr.**

## Futures

*Tues 12 Apr and Tues 19 Apr*

Textbook: Chapter 13, pp. 351-363; Chapter 14, pp. 373-390

## Corporate Credit and CDS

*Tues 19 Apr and Tues 26 Apr*

Textbook: Chapter 19, pp. 527-536, 542-559

## Mortgages and MBS

*Tues 26 Apr*

Textbook: Chapter 20, pp. 563-573, 575-590

## Final Exam

*Tues 3 May*

## Summary of Course Calendar

Class	Date	Topic
1	Tues 8 Feb	Overview
2	Tues 15 Feb	Arb, DFs, Rates, Spreads (Gov't Bonds and Interest Rate Swaps)
3	Tues 22 Feb	Arb, DFs, Rates, Spreads (Gov't Bonds and Interest Rate Swaps)
4	Tues 1 Mar	IR Risk and Hedging <i>Problem Set #1 Distributed</i>
5	Tues 8 Mar	IR Risk and Hedging <i>Problem Set #1 Due</i>
	Tues 15 Mar	<b>Spring Break (no class)</b>
6	Tues 22 Mar	IR Risk and Hedging
7	Tues 29 Mar	Fixed Income Asset Management <i>Problem Set #2 Distributed</i>
8	Tues 5 Apr	Repo <i>Problem Set #2 Due</i>
9	Tues 12 Apr	Futures
10	Tues 19 Apr	Futures / Corporate Credit and CDS
11	Tues 26 Apr	Corporate Credit and CDS / Mortgages and MBS
12	Tues 3 May	<b>Final Exam</b>