

NEW YORK UNIVERSITY STERN SCHOOL OF BUSINESS
Debt Instruments and Markets
Syllabus for FINC-UB.0026 Fall 2011

Professor Jennifer N. Carpenter

Office hours: Mon 5-6 or by appointment

Phone: 998-0352, Fax: 995-4233

Office: K-MEC 9-99

e-mail: carpenter@stern.nyu.edu

<http://www.stern.nyu.edu/~carpenter>

Course Description

This course describes important fixed income securities and markets and develops tools for valuing these securities and managing interest rate risk. The course covers traditional bonds and term structure concepts, as well as fixed income derivatives and financial engineering.

Tentative Schedule of Lectures

- Sep 7 Coupon bonds and zeroes
- Sep 12 Zero rates vs. Rate of return
- Sep 14 Yield to maturity
- Sep 19 Duration
- Sep 21 Immunization
- Sep 26 Convexity
- Sep 28 Forward contracts
- Oct 3 Forward rates
- Oct 5 Repos
- Oct 12 Floating rate notes
- Oct 17 Swaps
- Oct 19 Swap spreads, Forward rate agreements
- Oct 24 No-arbitrage pricing
- Oct 26 Midterm
- Oct 31 Risk-neutral probabilities
- Nov 2 Dynamic trading strategies
- Nov 7 Financial engineering
- Nov 9 Hedging, Options
- Nov 14 Caps
- Nov 16 Floors and collars
- Nov 21 American options
- Nov 23 Callable bonds
- Nov 28 Swaptions
- Nov 30 Mortgage market
- Dec 5 Passthroughs
- Dec 7 CMOs
- Dec 12 Treasury bond futures
- Dec 14 Eurodollar futures

Dec 19 2-3:50: Final Exam for Section 1, MW 2:00

Dec 21 4-5:50: Final Exam for Section 2, MW 3:30

Course Materials

Required

Lecture notes and problem sets

Recommended

P. Veronesi, *Fixed Income Securities: Valuation, Risk, and Risk Management*, Wiley, 2010.

B. Tuckman, *Fixed Income Securities*, Wiley, 2002, 2nd ed.

Course Requirements

Grades will be based on the following.

Class Participation (5%)

Problem Sets (5%)

Midterm (40%)

Final (50%)

Exams

Closed note, closed book. Please bring a calculator.

You must take each of your exams as scheduled. Otherwise, with the following two exceptions, your grade for the exam will be zero.

- 1) In case of a legitimate, foreseeable conflict, in order to take the exam at a different time, you must make a request in writing or by email at least one week prior to the exam, and obtain my written or email permission prior to the exam.
- 2) In case of an emergency, you must provide formal, written verification, such as a letter from a doctor.

Weekly Problem Sets

Because the material is technical and new concepts build on old ones, it will be essential to do the problem sets in order to follow the lectures and succeed on the exams. To facilitate learning, I encourage students to work together on these problem sets. Groups of students working together should submit just one assignment. All students in the same group will get the same grade. I cannot accept late assignments.

TA Office Hours

My TAs, Jeff Wang and Tianyou Xing, will hold office hours in KMC 4-80 on Tuesdays at 5-6. I encourage students to make the most of this opportunity to get regular help and feedback, and to use this reserved room to meet for group work as well.

Warning

The study of fixed income securities is quantitative by nature and this course will be taught very rigorously. The course will require a consistent commitment of time, energy, and concentration, both in and outside class, throughout the semester.

Grading

At NYU Stern we seek to teach challenging courses that allow students to demonstrate differential mastery of the subject matter. Assigning grades that reward excellence and reflect differences in performance is important to ensuring the integrity of our curriculum.

In general, students in this course can expect a grading distribution similar to that used in our core courses, where:

- 25-35% of students can expect to receive A's for excellent work
- 50-70% of students can expect to receive B's for good or very good work
- 5-15% of students can expect to receive C's or less for adequate or below work

Note that while I will use the above as a guide, the actual distribution for this course and your own grade will depend upon how well each of you actually performs in this course.

Re-Grading

In line with Grading Guidelines for the NYU Stern Undergraduate College, the process of assigning of grades is intended be one of unbiased evaluation. This means that students are encouraged to respect the integrity and authority of the professor's grading system and discouraged from pursuing arbitrary challenges to it.

If a student feels that an inadvertent error has been made in the grading of an individual assignment or in assessing an overall course grade, a request to have that grade re-evaluated may be submitted. Students should submit such requests in writing to the professor within 7 days of receiving the grade, including a brief written statement of why he or she believes that an error in grading has been made.

Academic Integrity

Integrity is critical to the learning process and to all that we do here at NYU Stern. All students are expected to abide by the **NYU Stern Student Code of Conduct**. A student's responsibilities include, but are not limited to:

- A duty to acknowledge the work and efforts of others when submitting work as one's own. Ideas, data, direct quotations, paraphrasing, creative expression, or any other incorporation of the work of others must be clearly referenced.
- A duty to exercise the utmost integrity when preparing for and completing examinations, including an obligation to report any observed violations.

Please see www.stern.nyu.edu/uc/codeofconduct for more information.

Students with Disabilities

Students whose class performance may be affected due to a disability should notify the professor early in the semester so that arrangements can be made, in consultation with the Henry and Lucy Moses Center for Students with Disabilities, to accommodate their needs.

Please see www.nyu.edu/csd for more information.