Course Description

This course will provide an introduction to fixed income securities and interest rate derivatives. The objectives of the course are to

- describe important fixed income securities and markets, and
- develop the analytical tools needed to value these securities and to manage interest rate risk.

The course begins with the analysis of securities characterized by pre-determined cash flows that occur at fixed points in time, then develops the tools needed to analyze interest rate derivatives and debt securities with embedded options. Mastery of the material covered is essential if you intend to pursue professional certifications such as the CFA (Chartered Financial Analyst) or FRM (Financial Risk Manager).

Required Text Book


Online Resources at [http://sakai.rutgers.edu](http://sakai.rutgers.edu)

By registering for this course (and paying your bill), you will automatically have access to the Sakai site for this course. All you need to log onto Sakai is your Rutgers NetID and password. When you log onto Sakai you will see a tab associated with this course. Clicking on the tab takes you to the course homepage. Once you are there, you will see in the left margin links to all of the content and tools in the site. There are three links for this course:

- Announcements – An area where I may periodically post announcements related to the course.
- Resources - An area where you will have access to lecture outlines, homework problems, homework solutions, and links to websites related to the course.
- Syllabus – An area where you can access the course syllabus.

*You should log onto the Sakai site and download the lecture outline for Part 1 of the course and bring it to the next class.*
Financial Calculator

The minimum requirement for completing this course is a calculator with a power function. However, you will find things much easier if you have a financial calculator. If you are planning a career in finance, you need one. Two popular calculators are the Texas Instruments BA II Plus (or Plus Professional) and the HP 10BII. Another widely used, but more expensive, calculator is the Hewlett Packard 12C (original or Platinum). If you buy the HP12C you will have to get used to using Reverse Polish Notation. RPN is a method of data entry that minimizes the number of keystrokes used to do chain calculations. The HP12C Platinum allows both RPN and algebraic notation. Currently, the BA II Plus and the HP 12C (both versions of each) are the only calculators allowed for the Chartered Financial Analyst and Financial Risk Manager certification exams.

Exam Schedule and Grading Weights

There are three required exams, two during the semester and one during finals week. Note that the exam dates are tentative and subject to change at the instructor’s discretion. The material covered will be identified and discussed prior to each exam. There are also two Bloomberg projects.

<table>
<thead>
<tr>
<th></th>
<th>Scheduled Date (tentative)</th>
<th>Grading Weight</th>
<th>Percent Weight</th>
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</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>February 16</td>
<td>100 points</td>
<td>25%</td>
</tr>
<tr>
<td>Exam 2</td>
<td>March 24</td>
<td>100 points</td>
<td>25%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Thursday, May 5, 11:30-2:30</td>
<td>140 points</td>
<td>35%</td>
</tr>
<tr>
<td>Bloomberg Project 1</td>
<td>Due March 3</td>
<td>30 points</td>
<td>7.5%</td>
</tr>
<tr>
<td>Bloomberg Project 2</td>
<td>Due April 14</td>
<td>30 points</td>
<td>7.5%</td>
</tr>
</tbody>
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Grades will be assigned based on each student's total points ranking relative to other student’s taking the course.

Missed Exams

If you miss exam 1 or exam 2 with a valid excuse, at the instructor’s convenience you will be required to either take a makeup exam or to replace the grade with the grade you earn by taking a comprehensive final.

Individual Bloomberg Projects

The Financial Markets Lab (BSB 106) hosts 16 Bloomberg terminals that provide student access to the same financial market data, news, research and analytics accessed “around the clock” by financial institutions, corporations, government agencies, and news organizations worldwide. Basic training can be accessed on the terminals and in workshops offered by lab staff. See the lab website for lab hours, training, and workshop details [http://fmlab.rutgers.edu/](http://fmlab.rutgers.edu/). Each student in this course will be required to complete a project that introduces you to functions commonly used by participants in the fixed income markets. Details will be announced later in the course.

Homework

Homework problems and solutions are available on the Sakai site. While these problems are not collected and graded it is essential that you do them in order to do well on the exams.
Extra Credit

You can earn 20 points of extra credit by passing the Bloomberg Fixed Income Essentials exam on BESS.

Cell Phones: While in class, be considerate of those around you and turn off your cell phone. If an emergency may be imminent, notify me before class and an exception may be made. **All cell phones must be out of sight during exams.** I reserve the right to deduct 10 points from your score each time that I see your cell phone during an exam.

Last day to drop with a “W”

Monday April 4, 2016.

Access to student email accounts

At times, it may be necessary to send the class an email. For instance, notices of any unexpected class cancellations will be provided by this method. These emails will be sent to students’ campus email addresses using either Sakai or the Rutgers automated mail system. It is each student’s responsibility to insure that they have a campus email account and to check their email account.

Academic Integrity Policy [http://studentconduct.rutgers.edu/academic-integrity](http://studentconduct.rutgers.edu/academic-integrity)

Students are responsible for understanding the principles of academic integrity and abiding by them in all aspects of their work at the University. Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

Student Code of Conduct

Violations of the Student Code of Conduct are considered serious infractions of student behavior and subject to penalties relative to the level of the matter. Students may not disturb normal classroom procedures by distracting or disruptive behavior. Please consult “Standards of Classroom Behavior,” in The University Code of Student Conduct [http://studentconduct.rutgers.edu/university-code-of-student-conduct](http://studentconduct.rutgers.edu/university-code-of-student-conduct)

Disability Services

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation. If the documentation supports your request for reasonable accommodations, your campus’s disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible.
Course Outline

Note: My lectures on Parts 1 through 4 will correspond closely to the coverage in the text. Coverage of Parts 5 through 7 will include substantial additional material.

Chapters numbers are for the custom text. Should you buy the 9th edition of the complete Fabozzi text some chapter numbers will differ as indicated below.

Part 1: Basic bond concepts: pricing and yield measures
   Chapters 1, 2, and 3
   Homework 1

Part 2: Measures of bond price volatility: duration, convexity, and immunization
   Chapter 4
   Homework 2

Part 3: U.S. Treasury securities and the term structure of interest rates
   Chapters 6 and 5, in that order
   Homework 3

Part 4: Overview of corporate debt securities
   Chapters 7 and 12
   (For Fabozzi 9th edition, chapters 7 and 20)
   Homework 4

Part 5: Risk neutral pricing of bonds and related options
   Custom chapter 11 and pages 372-380 of chapter 14
   (For Fabozzi 9th edition, chapter 18 and pages 698 – 706 of chapter 30
   Homework 5

Part 6: More interest rate derivatives: repurchase agreements, swaps, and futures
   Chapter 13
   (For Fabozzi 9th edition, chapter 29)
   Homework 6

Part 7: Mortgage-backed securities
   Chapters 8, 9, and 10
   (For Fabozzi 9th edition, chapters 10, 11, and 12)
   Homework 7

Final Exam, Thursday May 10, 11:30 am - 2:30 pm