

Econ 171a
Financial Economics (Spring 2013)

Spring 2013
Lectures: Tue, Fri 11:00am-12:20pm
Recitation: TBD
Location: Lemberg 055

Professor Davide Pettenuzzo
Sachar 214a, (781) 736-2834
Office hours: Monday, 10:00-11:00 AM
dpettenu@brandeis.edu

INSTRUCTOR:

Prof. Davide Pettenuzzo
Office hours: Monday, 10:00-11:00 AM

TEACHING ASSISTANT:

Yosef Schaffel (yschaffe@brandeis.edu)

TA OFFICE HOURS:

TBD

MEETING TIMES AND LOCATION:

Lectures: Tue, Fri 11:00am-12:20pm
Location: Lemberg 055

Recitation: TBD
Location : TBD

PREREQUISITES AND CO-REQUISITES:

Econ 80a and Econ 83a are pre-requisites for this course

COURSE MATERIAL ONLINE:

Course material will be posted online on the LATTE platform. You will need your UNet username and password to log on to the system at <http://latte.brandeis.edu>. You should check this site for the latest versions of course materials (once updates are posted I will let you know in class).

I will post copies of the lecture slides on LATTE before each class. I recommend that you take a look at the slides before you come to class.

COURSE DESCRIPTION:

The course covers topics related to financial economics, including investors' attitudes toward risk, capital allocation, portfolio selection, asset pricing models (Capital Asset Pricing Model and Arbitrage Pricing Theory), the efficient market hypothesis, fixed income markets, equity valuation, and options and futures markets.

The course is lecture based. Lectures consist of covering the theory, examples, and class discussion. Homework assignments focus on applying the material from lectures. Students

should have a basic understanding of microeconomics, statistics, and algebra (see also prerequisites above).

LEARNING GOALS:

- Understand the fundamental principles of investment in financial markets
 - how investors make investment decisions
 - what determines returns and asset valuations
- Gain a quantitative understanding of
 - capital allocation decisions
 - equity valuation, bond markets, and option pricing
- Increase understanding of current events in financial markets

READINGS AND PREPARING FOR CLASS:

The textbook for the course is:

Bodie, Kane, and Marcus (BKM) “Investments” 9th edition

I recommend that you use the 9th edition and will assume that you are reading the 9th edition. Please also be aware that any reference to book chapters or problems will be for the 9th edition.

Each class has readings in the book associated with it. For the exact chapter listing you can refer to the detailed course outline (below). I encourage you to read these sections, ideally before class. There will often be parts of the chapter that we do not cover in depth or skip entirely. If you are interested in learning material above and beyond the class, those sections of the book are a good place to start.

TA SESSIONS AND PRACTICE QUESTIONS:

The TAs will be holding review sessions roughly once every two weeks. Exact times and locations for the different sessions will be listed in the course outline

TA sessions are optional. The sessions are meant to give you a chance to apply and review the material from class. I do not expect everyone to attend these sessions. A couple of days before each TA session I will post TA Session Practice Questions on LATTE. The TA in charge of the session will work through the solutions during the session. The Practice Questions are designed to apply and review the material from class. They are entirely optional. If you plan to attend the TA session I strongly encourage you to attempt the practice questions beforehand. Solutions will be posted after the session.

Apart from going over the practice questions, these sessions will also give you a chance to ask questions about the material in class that you would like to discuss or review further.

REQUIREMENTS AND EVALUATION:

You are required to attend all classes, participate in class discussions, familiarize yourself with (and follow!) the policies on academic integrity (see below). You should also keep up with general financial news. This will form part of the basis for class discussion.

Your grade will be based on class participation, attendance (I will collect attendance at the beginning of each class), problem sets, the midterm exam, and the final exam. If you think

you may have to miss the midterm, you need to contact me *before* the exam and have a *very* good reason. There will be no make-up midterm. If you miss it, more weight will be put on the other components of your grade. All exams will cover material covered up to the point at which the exam is held.

1. Problem Sets – PS (30%):

There will be seven problem sets (PS). The problem sets will generally be posted on LATTE after class (either Tuesday or Friday). A tentative outline of PS topics and due dates is in the course outline (below). If you would like, you may work in small groups of 2-3 people to discuss the problem sets. However, you *must* write up answers individually. When you hand in your PS, make sure to list the members of your group. Note that if you simply copy your answers from one of your classmates in addition to receiving a zero on the problem set you will be in violation of Brandeis rules on academic honesty and may not receive credit for the course. Please also be aware that I will not be able to accept *any* late submissions. Solutions will be posted on LATTE after you have handed in the problem set.

2. Midterm Exam (30%):

The midterm examination will be held on March 1st in class.

3. Final Exam (40%):

The final examination will be held on TBD. The final exam will cover material from the entire course with a slight emphasis on the part of the course after the midterm. There will be a review for the final during the last.

Stock Market Game (optional)

Students are encouraged to participate in the stock market game described in an additional handout. While not required or graded, the game's top five finishers will receive bonus points on their last exam. 5 pts to 1st place, 4 pts to 2nd and so on.

POLICY ON CALCULATORS:

You can use any calculator you would like when solving problems on the problem sets, including scientific, programmable, graphing, financial, or software (such as Excel). However, on the exams (i.e. midterm, and final) you will *not* be allowed to use financial calculators that are capable of directly calculating bond price, annuity value, yield to maturity, or duration. In order to prepare for this, I strongly advise everyone to make sure that you have a calculator available to you which you can use to solve problems at exam time.

ACCOMMODATION FOR DISABILITIES:

If you are a student with a documented disability on record at Brandeis University and wish to have a reasonable accommodation made for you in this class, please see me immediately.

ACADEMIC INTEGRITY:

You are expected to be familiar with and to follow the University's policies on academic integrity (see <http://www.brandeis.edu/studentlife/sdc/ai/>). Instances of alleged dishonesty will be forwarded to the Office of Campus Life for possible referral to the Student Judicial System. Potential sanctions include failure in the course and suspension from the University.

OVERVIEW OF TOPICS COVERED:

- Introduction to financial markets, risk and return (4 lectures)
- Modern portfolio theory (5 lectures)
- CAPM, APT, and market efficiency (4 lectures)
- Security analysis and valuations
 - Bonds (3 lectures)
 - Equity valuation (2 lectures)
 - Derivatives (3 lectures)
- Credit risk, futures, international markets (3 lectures)

DETAILED COURSE OUTLINE:

The course outline (below) lists the topics covered and the readings for each class. I have also listed the dates for the Problem Set (**PS**) due dates, **Midterm Examination** date, and tentative **Final Examination** date (TBD), as well as the dates for the optional TA sessions. Please note that dates may change. I will update the syllabus accordingly and post the new version on LATTE.

<u>Date:</u>		<u>Readings (BKM):</u>	<u>PS:</u>
1/15 (Tue)	<u>Lecture 1: Overview of course, Introduction</u>	1.1-1.4	
1/18 (Fri)	<u>Lecture 2: Introduction to Financial securities</u>	2, 3.2, 3.5-3.7	
1/22 (Tue)	<u>Lecture 3: Review of statistical concepts</u>	Appendix A.1, A.3	
1/23 (Wed)	TA session 1: Present and future value, statistics review		
1/25 (Fri)	<u>Lecture 4: Risk and return</u>	5.1, 5.3, 5.4-5.6, 5.7, 5.8	
1/29 (Tue)	<u>Lecture 5: Risk preferences and capital allocation</u>	6.1, 6.2, 6.4	PS1: Risk and return due
2/1 (Fri)	<u>Lecture 6: Capital allocation</u> (2 assets: CAL, CML, POS)	6.4-6.6, 7.2	
2/5 (Tue)	<u>Lecture 7: Portfolio selection</u> (risk free and 2 risky assets)	7.2, 7.3	
2/6 (Wed)	TA session 2: Risk and return, risk preferences		
2/8 (Fri)	SNOW DAY – NO CLASSES		
2/12 (Tue)	<u>Lecture 8: Markowitz portfolio selection</u>	7.1, 7.4, 8.1	PS2: Capital allocation due
2/13 (Wed)	TA session 3: Capital allocation, portfolio selection		
2/15 (Fri)	<u>Lecture 9: Index models</u>	8.2, 8.3, 8.5	

Recess week – no classes			
2/26 (Tue)	<u>Lecture 10: Capital Asset Pricing Model</u> Review for Midterm	9.1-9.2	
3/1 (Fri)	<u>Midterm</u>		
3/5 (Tue)	<u>Lecture 11: Arbitrage Pricing Theory</u>	10.1-10.3, 9.3, 13.3	
3/6 (Wed)	TA session 4: Index models, CAPM, APT Discussion of Midterm solutions		
3/8 (Fri)	<u>Lecture 12: Market efficiency</u>	11.1-11.5, 13.1	PS3: Asset pricing due
3/12 (Tue)	<u>Lecture 13: Bond pricing, introduction to fixed income</u>	14.1-14.4	
3/15 (Fri)	<u>Lecture 14: Bond pricing, term structure of interest rates</u>	15.1-15.4	
3/19 (Tue)	<u>Lecture 15: Bond pricing, duration, swaps</u>	16.1, 23.4	
3/20 (Wed)	TA session 5: Market efficiency, Bonds		
3/22 (Fri)	<u>Lecture 16: Equity valuation</u>	18.1-18.3	PS4: Bonds due
Recess week – no classes			
4/5 (Fri)	<u>Lecture 17: Equity valuation, dividend discount model</u>	18.3, 18.4	
4/9 (Tue)	<u>Lecture 18: Options</u>	20.1-20.3	
4/10 (Wed)	TA session 6: Equity valuation, Options		
4/12 (Fri)	<u>Lecture 19: Option strategies, option pricing</u>	20.4, 21.1, 21.3	
4/16 (Tue)	<u>Lecture 20: Option pricing</u>	21.3, 21.4	PS5: Equity valuation due
4/19 (Fri)	<u>Lecture 21: Credit risk</u>	14.5, 23.4	
4/23 (Tue)	<u>Lecture 22: Futures</u>	22	
4/24 (Wed)	TA session 7: Equity valuation, Options		
4/26 (Fri)	<u>Lecture 24: Investing in international markets</u>	25.1-25.3	
4/30 (Tue)	Review for Final		PS6: Options due
5/3 (Friday)	<u>Final Examination</u> (location TBD)		
