

BRANDEIS INTERNATIONAL BUSINESS SCHOOL

**FIN 201A: FINANCIAL THEORY
SYLLABUS FALL 2009**

Fall 2009
S1: Tu, Fr 9:10am-10:30am
S2: Tu, Fr 10:40am-12noon
Lemberg Academic Center, Lee Hall

Professor Jens Hilscher
Lemberg 252, (781) 736-2261
Office hours: Tu 2:00pm-4:00pm
hilscher@brandeis.edu

TEACHING STAFF:

Prof. Jens Hilscher

Office hours: Tuesdays 2:00pm to 4:00pm and by appointment

INSTRUCTORS:

Ly Tran (head TA)	lyhuyen@brandeis.edu
Georgiana Buturoiu	buturoiu@brandeis.edu
Daniel Hermansson	danielh@brandeis.edu
Supriya Rawal	supriya@brandeis.edu
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TA OFFICE HOURS:

There will be office hours twice a week Mondays from 3:00pm to 4:00pm and Thursdays from 3:00pm to 4:00pm (no TA session) or 4:30pm to 5:30pm (if there is a TA session). The TA holding the office hour will be rotating.

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 will consist of covering the theory, examples, and class discussion. Homework assignments will focus on applying the material from lectures. Students should have a basic understanding of microeconomics, statistics, and algebra (see also prerequisites below).

PREREQUISITES OR CO-REQUISITES:

ECON 210f or statistics (may be taken concurrently). The course may not be taken for credit by students who have previously taken ECON 171a. Students who have taken ECON 171a should enroll in FIN 205a.

MEETING TIMES AND LOCATION:

Section 1 (S1): Tuesday, Friday 9:10am to 10:30am

Section 2 (S2): Tuesday, Friday 10:40am to 12 noon

Lemberg Academic Center 180, Lee Hall

You should attend *only* the class in which you are officially enrolled.

COURSE MATERIAL ONLINE:

Course material will be posted online on the LATTE/Moodle 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).

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 be part of the basis of class discussion.

Your grade will be based on class participation, attendance, in class review problems (short quizzes), 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. Class participation (10%):

Class is interactive and I expect everyone to participate. I also expect you to attend class. I will record attendance each class. This will be done either through a sign-up sheet or by you completing the review problem (see next item).

2. Review Problems – RP (10%):

We will have 11 or 12 short in class closed book review problems (RP). The RPs will cover the material from the last 2 classes. Studying for them will give you a chance to review the most recent material and to check whether or not you are comfortable with it. The RPs will take about 10 minutes to complete and will always be at the beginning of class, so don't be late! I will remind you about an upcoming RP in the previous class. A tentative schedule with dates and lectures covered is included in the course outline (below). I will post solutions on LATTE/Moodle. There will be no make-up RPs.

3. Problem Sets – PS (20%):

There will be 6 problem sets (PS). The problem sets will be posted on LATTE/Moodle after class (either Tuesday or Friday) and will be due at the beginning of class the following week. 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 2-4 people to discuss the problem sets. However, you *must* write up answers individually. This is particularly important since the problem sets will be absolutely *essential* practice for the midterm and final exams. If you don't fully understand your answers you will not be prepared. When you hand in your PS, list the members of your group. Please be aware that I will not be able to accept *any* late submissions. Solutions will be posted on LATTE/Moodle after you have handed in the problem set.

4. Midterm Exam (20%):

The midterm examination will be held on Friday, October 16th in class.

5. Final Exam (40%):

The final examination is tentatively scheduled for Monday December 7th from 1:30pm to 4:30pm, date and time to be confirmed, location TBA. 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 class on Tuesday, December 1st as well as two 2-hour sessions of additional office hours from 2pm to 4pm on Thursday and Friday December 3rd and 4th in the Chancellor's Suite.

Grade distribution:

The grade distribution for the class will be close to:

A	30%
A-	15%
B+	15%
B	30%
B- and below	10%

READINGS AND PREPARING FOR CLASS:

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

The required textbook for the course is:

Bodie, Kane, and Marcus (BKM) "Investments" 8th edition

The 7th edition of this book covers very similar material but there are several parts of the book that have changed substantially from the 7th edition to the 8th edition. I therefore recommend that you use the 8th edition and will assume that you are reading the 8th edition. Please also be aware that any reference to book chapters or problems will be for the 8th 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, typically (but not necessarily always) on Thursdays from 3pm to 4:30pm. Exact times and locations (currently in International Hall) for the different sessions are listed in the course outline (below). There are a total of 8 sessions.

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/Moodle. 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.

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. For more information go to: <http://www.brandeis.edu/disability>

ACADEMIC INTEGRITY:

You are expected to be familiar with and to follow the University's policies on academic integrity. 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.

See: "Brandeis University Rights and Responsibilities" chapter 3;
(<http://www.brandeis.edu/studentlife/sdc/rr/>).

Here is the first part: "3.0 Every member of the University community is expected to maintain the highest standards of academic integrity. A student shall not submit work that is falsified or is not the result of the student's own effort. Infringement of academic honesty by a student subjects that student to serious penalties that may include failure on the assignment, failure in the course, suspension from the University or other sanctions (see Section 21). A student who is in doubt regarding standards of academic honesty in a course or assignment should consult the faculty member responsible for that course or assignment before submitting the work. A student's lack of understanding is not a valid defense to a charge of academic dishonesty." If you are ever in doubt about any of these rules please contact me immediately.

OVERVIEW OF TOPICS COVERED:

Introduction, risk and return (4 lectures)
Capital allocation (4 lectures)
CAPM and APT (3 lectures)
Market efficiency (2 lectures)
Bonds (3 lectures)
Equity valuation (2 lectures)

Options (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 Review Problems (RP), Problem Set (PS) due dates, **Midterm Examination** date, and tentative **Final Examination** date (TBA), as well as the dates for the 8 optional TA sessions. Please note that dates may change. I will update the syllabus accordingly and post the new version on LATTE/Moodle.

<u>Date:</u>		<u>Reading:</u>
8/28 (F)	<u>Lecture 1: Overview of course, Introduction</u>	BKM 1.2-1.4, 10.2 pp. 324-325
9/1 (Tu)	<u>Lecture 2: Review of statistical concepts</u>	BKM 5.4-5.6
9/3 (Th)	TA session 1: Present and future value, statistics review (3pm – 4:30pm, International Hall)	
9/4 (F)	<u>Lecture 3: Financial securities</u> RP1 (covers lectures 1, 2)	BKM 2, 3.2, 3.5-3.7
9/8 (Tu)	<u>Lecture 4: Risk and return</u>	BKM 5.1, 5.3, 5.5, 5.8, 5.10
9/11 (F)	<u>Lecture 5: Risk preferences and capital allocation</u> RP2 (covers lectures 3, 4)	BKM 6.1, 6.2, 6.4
9/15 (Tu)	<u>Lecture 6: Capital allocation</u> (2 assets: CAL, POS) PS1: Risk and Return due	BKM 6.4-6.6, 7.2
9/17 (Th)	TA session 2: Risk and return, risk preferences (3pm – 4:30pm, International Hall)	
9/18 (F)	<u>Lecture 7: Portfolio selection</u> (risk free and 2 risky assets) RP3 (covers lectures 5, 6)	BKM 7.2, 7.3
9/22 (Tu)	<u>Lecture 8: Markowitz portfolio selection</u>	BKM 7.1, 7.4, 8.1
9/25 (F)	<u>Lecture 9: Index models</u> RP4 (covers lectures 7, 8) PS2: Capital Allocation due	BKM 8.2, 8.3, 8.5
10/1 (Th)	TA session 3: Capital allocation, portfolio selection (3pm – 4:30pm, International Hall)	
10/2 (F)	<u>Lecture 10: Capital Asset Pricing Model</u>	BKM 9.1-9.2
10/6 (Tu)	<u>Lecture 11: Arbitrage Pricing Theory</u> RP5 (covers lectures 9, 10)	BKM 10.1-10.3, 9.3, 13.3
10/9 (F)	<u>Lecture 12: Market efficiency, empirical evidence</u>	BKM 11.1-11.4
10/13 (Tu)	<u>Lecture 13: Market efficiency, interpreting the evidence</u> Review for midterm RP6 (covers lectures 11, 12) PS3: Asset Pricing due	BKM 11.5, 12
10/15 (Th)	Additional Office Hours (1pm – 3pm, Lemberg 55)	
10/15 (Th)	TA session 4: Index models, CAPM, APT (3pm – 4:30, International Hall)	
10/16 (F)	<u>Midterm Examination</u> (in class)	

10/20 (Tu)	Lecture 14: Bond pricing, introduction to fixed income	BKM 14.1-14.4
10/22 (Th)	TA session 5: Market efficiency, Discussion of Midterm solutions (3pm – 4:30pm, International Hall)	
10/23 (F)	Lecture 15: Bond pricing, term structure of interest rates RP7 (covers lectures 13, 14)	BKM 15.1-15.4
10/27 (Tu)	Lecture 16: Bond pricing, duration, swaps Note: <u>different location</u> : Abelson 131	BKM 16.1, 23.4
10/30 (F)	Lecture 17: Equity valuation Note: <u>different location</u> : Abelson 131 RP8 (covers lectures 15, 16)	BKM 18.1-18.3
11/3 (Tu)	Lecture 18: Equity valuation, dividend discount model PS4: Bonds due	BKM 18.3, 18.4
11/5 (Th)	TA session 6: Bonds, Equities (3pm – 4:30pm, International Hall)	
11/6 (F)	Lecture 19: Options RP9 (covers lectures 17, 18)	BKM 20.1-20.3
11/10 (Tu)	Lecture 20: Option strategies, option pricing	BKM 20.4, 21.1, 21.3
11/12 (Th)	TA session 7: Options (3pm – 4:30pm, International Hall)	
11/13 (F)	Lecture 21: Option pricing RP10 (covers lectures 19, 20) PS5: Equity valuation due	BKM 21.3, 21.4
11/17 (Tu)	Lecture 22: Credit risk	BKM 14.5, 23.4
11/19 (Th)	TA session 8: Credit Risk, Review for Final (3pm – 4:30pm, International Hall)	
11/20 (F)	Lecture 23: Investing in international markets RP11 (covers lectures 21, 22)	BKM 25.1-25.3
11/24 (Tu)	<u>Guest Lecture</u> : Joram Cukierman Derivatives and how they apply to Energy Trading PS6: Options due	
12/1 (Tu)	Lecture 24: Futures Review for Final RP12 (covers lecture 23)	BKM 22
12/3 (Th)	Additional Office Hours (2pm – 4pm, Chancellor's Suite)	
12/4 (F)	Additional Office Hours (2pm – 4pm, Chancellor's Suite)	
12/7 (M)	Final Examination (1:30pm – 4:30pm, date and time to be confirmed, location TBA)	