Economics 1710: Investments I
Spring 2020 version 22Jan20
MWF 11:00-11:50 am (S01); location: Friedman 102

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Office hours: 2-3 pm Mondays, 12:30-1:30 pm Tuesdays, or by appointment

TAs: Griffin McCauley, Radhika Rangarajan, Andrew Rose and Mika Shevchenko
Drop-by "Econ 1710 Clinic" at Sci Li Mezz, Sunday nights (2-hour block TBA) or meetings by appointment

Course description
This class discusses the function and operation of asset markets; the determinants of the prices of stocks, bonds, options and futures; the relations between risk, return, and investment management; the capital asset pricing model, normative portfolio management, and market efficiency.
Prerequisites:
1. Intermediate Microeconomics, i.e. ECON 1110 or ECON 1130
2. Econometrics, i.e. ECON 1620/1630, APMA 1650/1655 or CSCI 0450/1450

Course materials
1. **Required textbook**: *Investments*, 11th edition by Bodie, Kane and Marcus
   - $132/semester rental at Brown Bookstore; two copies on reserve at The Rock
2. **Required**: a calculator with exponents for homework use; exam calculators will be provided.
3. Class website: **canvas.brown.edu**. It will be the repository of all up-to-date information on this class.

Learning goals:
(1) To learn to "think like an economist," moving from observing a real world problem to economic model (both mathematically and graphically), calculating the answer and then verbally interpreting the result in the context of the original problem.
(2) To be a knowledgeable participant in financial markets
(3) To reinforce the value of working hard with integrity and being an active participant in one's own learning process.

Expected time required for the course: Over 14 weeks, students will spend 3 hours per week in class (42 hours total), and 1 hour per week in discussion section (14 hours). Homework, reading, and studying for midterm examinations will take approximately 7.5 hours per week (105 hours total). In addition, there is a 3-hour final exam for which approximately 16 hours of review is assumed.

Evaluation: Final grades will be based on performance of:

1.	Weekly homework assignments	30%
2.	Exam #1, in class (Wed, Mar 4)	20%
3.	Exam #2, in class (Wed, Apr 8)	20%
4.	Final exam, group (Fri, May 15, 9am - noon)	30%

Final grades will be based on the percent of the total points earned by each student with cutoffs:

90% or higher	A
80% to <90%	B
70 to <80%	C
Less than 70%	NC

These cutoffs are the guaranteed levels -- if you hit an overall average of 90%, you are guaranteed an "A." On the other hand, you must obtain an overall average of 70% in order to be guaranteed to pass this class. I may move the cutoffs downwards (to your benefit) at my discretion.

Rules:

1. Midterms will be held during class and will be based on lecture, homework, section, and the readings. The format will be pencil and paper multiple choice and short problems, and you will be expected to memorize relevant formulas.

2. The final exam is cumulative and will be held during the university-designated exam time for this course (exam group: Friday, May 15, 9am - noon).

3. For exams, I will be providing the "Econ Department Calculator" for you to use (i.e. Casio fx-300MS Plus Scientific Calculator). It is the simplest and cheapest solar-powered calculator with needed functions for this course. A photo of the calculator is on the Canvas site along with a pdf document of instructions.

4. Exams may be rescheduled given a legitimate excuse (as deemed by me) before the regularly scheduled exam time. However, **within 48 hours of any exam**, any excused absence and make up will require a note from the dean. Note that a doctor's note is NOT considered sufficient.

5. All homework is generally due on **Mondays** and must be submitted on online as a pdf document on Gradescope by the start of class at 11:00 am exactly. I prefer handwritten homework, which especially makes sense when we have calculations and graphs, but also as a manual reinforcement of ideas.

Homework is graded out of 2 points based on EFFORT (e.g. completion and timeliness). Full credit is obtained by handing in a completed "good faith effort" homework that is turned in on time. Late homework (turned in Wed) is graded on the basis of half-credit (out of 1 point). No credit is given for extremely poor completion (determined by me), "bad faith" effort (determined by me), or for no assignment turned in by the start of class on Wednesday.

6. Sections meet weekly with the TAs with the purpose of going over homework, teaching a few hands-on applications of class topics and answering any questions you may have in a smaller group setting.

7. In the event of any emergency/crisis, please get a Dean's note. It is generally good practice to do so since there is no ambiguity to instructors about whether an accommodation is needed, while also maintaining your privacy. **However**, if you are facing an ongoing situation that may impact your performance, I would rather know about it well before an exam, so we can work together to strategize about providing you extra support if needed. There is little I can or will do about exam performance after it is graded.

8. All grades for this class are posted on Canvas so there is complete transparency about all the inputs to your final grade. This means that you bear responsibility for ensuring that your grades are properly recorded. Issues about any homework or exam grades must be initiated within 2 weeks of the posting of that particular grade.

9. Under no circumstances is cheating permitted or tolerated. I maintain extensive records and have a long memory for such issues.

10. If you are a SEAS student, please let me know ASAP with the documentation and I will make the necessary accommodations. I take your privacy very seriously and will handle your case personally.

A final note: This class is an upper-level economics class. Thus, I will treat you as budding economists and will presume that given the information in this syllabus, you now fully informed about the rules of the class, and make your own decisions (accepting the resultant consequences).

This page is the projected schedule of topics by date (but may be revised during the course of the semester). The actual schedule during the semester will be kept updated on Canvas.

MONDAY		WEDNESDAY		FRIDAY
		JAN 22 INTRODUCTION (CHAPT 1)		JAN 24 REVIEW OF KEY FINANCIAL CONCEPTS
JAN 27 DEFINING "ASSETS" (CHAPT 2) **HW #1**		JAN 29 HOW ASSETS ARE TRADED (CHAPT 3)		JAN 31 SHORT SALES (CH 3) +INVESTMENT COMPANIES (CHAPT 4)
FEB 3 MUTUAL FUNDS + ETFS (CH 4) **HW #2**		FEB 5 DEFINING THE SAFE ASSET (RISK-FREE RATE) (CHAPT 5)		FEB 7 DEFINING RISKY ASSETS (CH 5, PT 2)
FEB 10 ALTERNATIVE RISK MEASURES (CH 5, PT 3) + RISK AVERSION AND UTILITY (CHAPT 6) **HW #3**		FEB 12 CAPITAL ALLOCATION LINE (BUDGET CONSTRAINT) (CH 6, PT 2)		FEB 14 INDIVIDUAL OPTIMAL CHOICE, KINKED CAL (CH 6, PT 3) + LEAD-IN TO CHAPT 7
FEB 17 **NO CLASS** **LONG WEEKEND**		FEB 19 DIVERSIFICATION; DERIVATION OF PORTFOLIO OPP SET (CHAPT 7) **HW #4**		FEB 21 DERIVATION, CONT (CH 7, PT 2)
FEB 24 OPTIMAL ALLOCATION WITH 2 RISKY ASSETS (CH 7, PT 3)		FEB 26 MARKOWITZ, SEPARATION PROPERTY (CH 7, PT 4) + CAPM ASSUMPTIONS (CHAPT 9) **HW #5 (NO LATE)**		FEB 28 CAPM RESULTS (CH 9, PT 2)
MAR 2 DERIVE CAPM EQUATION (CH 9, PT 3)		**MAR 4** **EXAM 1 (CH 1-7, HW #1-5)**		MAR 6 SECURITY MARKET LINE (CH 9, PT 4)
MAR 9 APT: FACTOR MODELS (CHAPT 10) **HW #6**		MAR 11 APT MODEL ASSUMPTIONS, SML RELATIONSHIP (CH 10, PT 2)		MAR 13 MULTIFACTOR APT, FAMA-FRENCH MODEL (CH 10, PT 3)
MAR 16 EFFICIENT MARKET HYPOTHESIS (CHAPT 11); **HW #7**		MAR 18 EMH, PART 2 (CH 11 PT 2)		MAR 20 DEFINING A BOND: BOND PRICING FORMULA (CHAPT 14)
MAR 23 **SPRING BREAK**		MAR 25 **SPRING BREAK**		MAR 27 **SPRING BREAK**
MAR 30 ACCRUED INTEREST; ZEROS, INDEXED, AND CALLABLE BONDS (CH 14, PT 2)		APR 1 REALIZED COMPOUND RETURN, DEFAULT RISK (CH 14, PT 3) **HW #8 (NO LATE HW)**		APR 3 INTRO TO EQUITIES; INTRINSIC VALUE OF STOCK (CHAPT 18)
APR 6 CONSTANT GROWTH DDM; PRICE DISCREPANCY, RETAINED EARNINGS (CH 18, PT 2)		**APR 8** **EXAM 2 (CH 9, 10, 11, 14, HW 6-8)**		APR 10 INDUSTRY LIFE CYCLE; DCF FORMULA (CH 18, PT 3)
APR 13 INTRO TO OPTIONS (CHAPT 20) **HW #9**		APR 15 BUY CALL VS. STOCK; OPTION STRATEGIES (CH 20, PT 2)		APR 17 OPTION STRATEGIES; PUT-CALL PARITY; ARBITRAGE (CH 20, PT 3)
APR 20 OPTION VALUE, COMP STATICS, AMERICAN V. EUROPEAN CALL (CHAPT 21); **HW #10**		APR 22 (LAST DAY OF CLASS) TWO-STATE OPTION PRICING (CHAPT 21)		**APR 24** **READING PERIOD**
DATE TBD: REVIEW SESSION "HW #11" (UNGRADED – CH 21)				**FRIDAY MAY 15, 2020** **FINAL EXAM (CUMULATIVE)** **9:00 AM - NOON**