

**Economics 413 - Financial Economics**  
**Rutgers University-New Brunswick**  
**Spring 2018**

Bruce Mizrach  
Google voice: (908) 913-0253  
e-mail: [mizrach@econ.rutgers.edu](mailto:mizrach@econ.rutgers.edu)

Office: NJH 301D  
Office Hours: M, Th 2:00-3:00 PM

**Goals:**

We study the functioning of capital markets for stocks, bonds, housing, foreign exchange, commodities, and derivative securities on these underlying instruments. Students will also learn about the market microstructure of these securities.

**Prerequisites: This is an upper level elective.**

220:320 (Intermediate Micro) and 220:322 (Econometrics). A grade of C or better is required.

**Texts:**

Bodie, Z., A. Kane and A. Marcus (BKM), *Investments*, New York: McGraw Hill, 11<sup>th</sup> ed, 2017.

The bookstore has rentals, used copies and e-book versions if you prefer. This is a widely used textbook, and you should not have any trouble selling back a used book.

**Additional REQUIRED readings:**

Supplemental reading will be made available through Sakai: <http://sakai.rutgers.edu>

News items pertinent to the class can be found in my Evernote notebook on financial markets: <http://www.evernote.com/pub/mizrach/Finance>. When I post relevant items, I will Twitter a link to: <http://twitter.com/#!/BMizrach>.

**Mobile Response Apps:**

We will be using the phone/computer based Reef Polling from iclicker:

<https://www.iclicker.com/students>

I will be using ONLY the mobile app not the iclicker. Pricing for the semester starts at \$14.99. You will need to create an account after you have paid for the license. Our course is EC 413:01 Spring 2018.

**Grading:**

Mid-term:	40%; <b>March 8th in class.</b>
Final:	45%; <b>May 3rd, 09:00-11:00 AM</b>
Problem sets and participation:	15%

**Trading Games:**

During our stock market and (possibly) derivatives unit, we will play simulated trading games. Details will be provided in class.

**Participation:**

Clicker points equal 1 problem set point. There is no maximum.

**Problem Sets:**

There will be 8 problem sets. Questions are in PDF files under “Problem Sets” in Sakai.

Submit your multiple choice answers in “Tests and Quizzes” by 30 minutes before class starts on the due date. Late submissions are penalized 20% cannot be submitted more than 24 hours late.

<b>Date (4 classes)</b>	<b>1. Models of Risk and Return</b>	<b>Text readings</b>
January 18	(a) Utility maximization	BKM 6
January 22	(b) Mean-variance analysis	BKM 7
January 22	(c) Efficient frontier	BKM 8
January 25	(d) CAPM and APT - Theory	BKM 9, 10;
January 25	(e) Empirical analysis of security returns	BKM 13
January 29	(f) Value at Risk	BKM 5.7
January 29	<b>Problem Set #1 Due</b>	

<b>Date (5 classes)</b>	<b>2. The Equity Market</b>	
February 1	(a) Valuation	BKM 18, 19;
February 5	<b>Equity Trading Game Starts</b>	
February 5	(b) Hedge funds, mutual funds and ETFs	BKM 4, 26;
February 8	(c) NYSE	BKM 3.2, 3.4;
February 12	<b>Problem Set #2 Due</b>	
February 12	(d) NASDAQ	BKM 3.2, 3.4;
February 12	(e) International markets	BKM 3.6, 25;
February 15	(f) Security analysis and investment bkg.	BKM 3.1, 19;
February 15	(g) Efficient markets and behavioral finance	BKM 11, 12;
February 19	(h) HFT, dark pools, Reg. NMS	BKM 3.5
February 19	(i) Current issues in the stock market	BKM 3.7-3.10
February 22	<b>Problem Set #3 due</b>	
February 23	<b>Equity Trading Game Ends (Friday)</b>	

<b>Date (4 classes)</b>	<b>3. Bond Markets</b>	
February 22	(a) Theory of interest rates	BKM 14
February 22	(b) Term structure	BKM 15
February 26	(c) Duration	BKM 16
February 26	(d) Treasury market	BKM 2.1-2.2;
March 1	(e) Ratings agencies	BKM 14.5
March 1	(f) Corporate bond market	BKM 14.5
March 5	(h) Sovereign/municipal bond market	BKM 2.2
March 5	<b>Problem Set #4 Due (No late submissions)</b>	
March 8	<b>MIDTERM EXAM</b>	

<b>Date (3 classes)</b>	<b>4. Housing Market</b>	
March 19	(a) Mortgage mathematics	BKM 16:530-33
March 22	(b) Mortgage backed securities	BKM 2:40-41, 16:511-13;

March 22	(c) Housing prices	BKM 1:22-23
March 26	(d) The subprime crisis	
March 26	<b>Problem Set #5 Due</b>	

<b>Date (2 classes)</b>	<b>5. Structured Finance</b>	
March 29	(a) Credit enhancement	BKM 1.7
April 2	<b>Problem Set #5 Due</b>	
April 2	(b) ABS, CDOs, CLOs and CMOs	BKM 2:40-41

<b>Date (5 classes)</b>	<b>6. Swaps, Futures and Options</b>	
April 2	(a) Intro to Derivatives	BKM 20
April 2	(b) Futures	BKM 22
April 5	<b>NO CLASS</b>	
April 9	(c) Interest rate swaps	BKM 23
April 9	(d) Credit default swaps	
April 9	<b>Derivatives game starts</b>	
April 12	(e.1) Options – risk neutral valuation	BKM 21
April 12	<b>Problem Set #6 Due</b>	
April 12	(e.2) Options – binomial, Black Scholes	
April 16	(e.3) Options – Hedging, exotics, strategy	
April 16	(f) Microstructure and OTC derivatives	
April 19	<b>Problem Set #7 Due</b>	
April 20	<b>Derivatives game ends (Friday)</b>	

<b>Date (2 classes)</b>	<b>7. Foreign Exchange Market</b>	
April 19	(a) Determinants of the exchange rate	BKM 17.1
April 19	(b) Eurozone	
April 23	(c) Interest parity relations	BKM 23.1
April 23	(d) Foreign exchange derivatives	
April 23	(e) Exchange rate crises	

<b>Date (1 class)</b>	<b>8. The Commodity Market</b>	
April 26	(a) ETFs and indices	BKM 23.5
April 26	(b) Metals	
April 30	(c) Energy and carbon	
April 30	<b>Problem Set #8 Due</b>	