

Syllabus – Fall 2015

Instructors:

- Juan Moreno-Cruz, Assistant Professor of Economics, Georgia Institute of Technology
- Mark Agah, Portfolio Manager, GMT Capital

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Office hours: By Appointment

Class Meetings: TR 12:05 pm - 1:25 pm

Course Description: This course provides the basic theoretical tools of microeconomic analysis and investment theory. The aims of the course are twofold. First, it is to enable students to understand and apply economic principles to consumer, business, and government decisions. Second, it is to enable students to understand investment decisions in a business environment.

Course Main Goal: After you are done with this course you should be able to observe any real world puzzle and write a sensible economic model that explains it. You should then be able to sensibly analyze the problem.

Textbooks:

Required texts: (V) Varian, Hal. Microeconomic Analysis, Third Edition. W.W. Norton and Company 1992.

(L) Luenberger, David G. Investment Science, Second Edition. Oxford University Press 2014.

Supplementary texts:

- Walter Nicholson and Christopher Snyder, Microeconomic Theory: Basic Principles and Extensions, 11th Edition. South-Western
- Mas-Colell, Whinston and Green, Microeconomic Theory, Oxford University Press, 1995
- Gibbons, Robert. Game Theory for Applied Economists. Princeton, NJ: Princeton University Press, 1992.
- Hull, John C. Options, Futures, and Other Derivatives, Ninth Edition, Prentice Hall

Course Web Page: All course materials will be posted on the web page through T-square (www.t-square.gatech.edu/portal). Please verify that you can log on to T-Square and access the information for this class.

Teaching Assistant: Evgeniya Tsybina (tsybinae@gatech.edu)

Course Requirements and Grading

Grade scale

A's	Above 90%
B's	Between 80%-90%
C's	Between 60%-80%
D's	Below 60%

Weights

Homework:	30%
First Midterm:	30%
Final Exam:	40%

Note: Proportions for each letter grade may vary depending on the overall class performance, class participation, etc. Throughout semester, no student is allowed to ask a personal negotiation on grade; I will not reply to such email(s).

Exams:

1. Most of exam questions may be more or less similar to those in problem sets. However, some questions may be designed in a challenging manner to test your understanding on the materials. Detailed information will be provided in class at due time.
2. You cannot make any appeal on partial credits on the exams, though you can appeal on the obvious grading errors, e.g. adding up marks.
3. No makeup tests for midterm will be administered. If there are exceptional circumstances and you can't take the regularly scheduled test, you must notify me before the regularly scheduled test with a legitimate reason along with official documentation. With an acceptable excuse, the final exams will be used to determine the course grade.

Problem Sets:

1. Throughout the semester, problem sets will be assigned every second week and they will be collected at the beginning of class time on a given due date. Any late submission is considered as no submission. When you find any appeal on the homework grading, you must consult me a week after you get them back.
2. Some questions from the problem sets will be chosen from our textbook and others will be added from other sources. Selected problems will be discussed in class. In order to perform well on the exams you must fully understand given problem sets.

Course Guidelines

Note for Math: While this will not be an issue for most of you, we will use calculus and algebra throughout the semester. For those who are not comfortable with math, please be sure to read Chapter 26 carefully. I will explain related math concepts in class, but you are expected to take care of the math basics yourself.

Recommended references for math:

- Chiang and Wainwright, Fundamental Methods of Mathematical Economics, 4th ed., McGraw-Hill, 2005.
- Hoy et al., Mathematics for Economics, 2nd ed., The MIT Press, 2001

Class Conduct

1. Please turn off cell phones, music players, etc. Please do not use headphones or earphones during the class. No Laptop in the classroom. No food (cookies, burger, sandwich, etc) in the classroom. (Non-alcoholic) Drinks are OK.
2. Be on time and do not leave earlier. If you must leave early, please let me know in advance. Chronic tardiness may result in course failure. If you miss class, please talk to your classmate who attended class regarding what we covered. If you miss class, I will not go over this material with you on an individual basis. Last minute emails will not be answered.
3. Any violation of Honor Code will be referred to the Dean of Students Office.

Course Calendar and Content

Part I: Introduction to Microeconomics, Consumer Theory, Production Theory and Market Demand

Midterm 1: Thursday, October 1st.

Part II: Investment Theory

Part III: Equilibrium, Game Theory

Final Exam: as scheduled by registrar.

Exam dates are fixed; you must plan your travel accordingly in advance.

Tentative Course Schedule

Week (Class dates)	Topics we teach/learn	Relevant chapter(s)	Notes
Part I			
Week 1 (Aug 18-20)	Technology	(V) Ch 1	Ch 26 Math
Week 2 (Aug 25-27)	Profit maximization and Profit Function	(V) Ch 2, 3	
Week 3 (Sep 1-3)	Cost Minimization and Cost Function	(V) Ch 4, 5, 6	PS 1. Due Sep 8
Week 4 (Sep 8-10)	Utility Maximization and Choice	(V) Ch 7, 8	
Week 5 (Sep 15-17)	Demand and Consumer Surplus	(V) Ch 9, 10	PS 2. Due Sep 22
Week 6 (Sep 22-24)	Uncertainty	(V) Ch 11	
Week 7 (Sep 29- Oct 1)	Review and Midterm Exam	Review	Midterm Exam
Part II			
Week 8 (Oct 6-8)	Capital Structure Optimization and Cash Flow	(L) Ch 6, 7, 18	
Week 9 (Oct. 15)	Valuation Analysis	(L) Ch 19	
Week 10 (Oct. 20-22)	Mergers and Acquisitions	Notes	PS 3. Due Oct 22
Week 11 (Oct. 27-29)	Investment Strategies	Notes	
Week 12 (Nov 3-5)	Overview of Alternative Investments	Notes	PS 4. Due Nov 5
Part III			
Week 13 (Nov. 10-12)	Competitive Markets	(V) Ch 13	
Week 14 (Nov. 17-19)	Game Theory	(V) Ch 15	
Week 15 (Nov. 24)	Monopoly and Oligopoly	(V) Ch 14, 16	PS 5. Due Nov 24
Week 16 (Dec. 1-3)	Exchange	(V) Ch 17	

Note: I will generally follow the above sequence. I may add or subtract chapter.

Detailed Schedule for Part II

Week 8 (Oct 6, 8)

Capital Structure Optimization and Cash Flow

1. Weighted Average Cost of Capital (WACC)
2. NPV/IRR Analysis
3. Project CF Analysis and Budgeting Decisions
4. Issuing Capital and internal investment decisions

Week 9 (Oct 15)

Valuation Methodologies

1. Valuing various forms of capital – equity, debt, preferred stock, an retained earnings
2. Capital deployment and expected returns
3. Valuing new business opportunities – build versus buy decisions

Week 10 (Oct 22)

Mergers and Acquisitions

1. General Overview
2. Reasoning behind M&A – strategic, product expansion, corporate governance
3. Case Studies – not all deals are appropriate for buyers and sellers alike

Weeks 11 and 12 (Oct 29, Nov 5)

Investment Strategies and Alternative Investments

1. Asset Allocation and its evolution over time
2. Risk/Reward and determining portfolio investments
3. Time Horizons and portfolio rebalancing
4. Alternatives – hedge fund strategies, private equity and REITs