ECON-80A: MICROECONOMIC THEORY

COURSE OVERVIEW

This course focuses on the analysis of the behavior of economic units within a market economy. These include consumers, firms, and regulators, among others. We will cover:
(1) an analysis of consumer demand theory; (2) the firm’s profit maximization problem and resulting market equilibrium and welfare concepts; (3) market failure and government responses; (4) distribution and equity-efficiency tradeoffs; and (5) basic game theory and key concepts in behavioral economics.

Prerequisites:
- **Math**: Students must have done one of the following to achieve this prerequisite: (1) received a C- or higher in MATH 10a, (2) attained at least a 4 on the AP Math AB test, (3) attained at least a 3 on the AP Math BC test, (4) passed the calculus placement exam that is administered by the Economics Department.
- **Economics**: Econ 10a.

Class Times:
- **S1**: M, W 2:00 PM–3:20 PM (Lemberg Academic Center 055)
- **S2**: M, W 3:30 PM–4:50 PM (Lemberg Academic Center 055)
- Recitation: M 6:30 PM - 8:20 PM (Golding Judaica Center 110)

TEACHING STAFF

Professor: Monica Singhal
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Office Hours: TBA

Teaching Assistants:
- Mack Chitulescu
  mchitule@brandeis.edu
- Yanjun Wang
  wyj813@brandeis.edu

TA Office hours: TBA
LEARNING GOALS

The purpose of this course is to give students a deeper understanding of microeconomics. Generally, this course aims to:

- Help students understand the analytical tools used in microeconomics.
- Analyze problems in microeconomics using such tools.
- Provide a basis on which students can take more advanced courses in economics.

REQUIREMENTS

Your grade will be based on class participation, attendance, problem sets, the midterm exam, and the final exam.

1. Class attendance and participation (10%):
Class is interactive and I expect (and encourage!) everyone to participate.

2. Problem Sets (20%):
There will be 7 written problem sets. The lowest assignment grade will be dropped. I strongly encourage students to complete all the assignments, since I believe the assignments are the best way to understand the course material and the best preparation for the midterm and final exam. However, this means that one allowance is made for unusual circumstances which may prevent a student from completing an assignment. Late assignments will therefore not be accepted under any circumstances.

   Students are encouraged to work on assignments in small groups of no more than four students. Assignments must be written up separately and must include the names of the other group members. Discussion with others is intended to clarify ideas, concepts, and technical questions, not to derive group homework set solutions. Identical homework set answers (especially when the steps used to derive answers are not shown or when questions of interpretation are involved) violate this policy and may receive no credit or result in disciplinary action.

3. Midterm Exam (30%):
The midterm examination will be held in class on October 21. Absence from the midterm is permitted only under exceptional circumstances, such as a medical emergency with appropriate documentation. In such cases, the other components of your grade will be reweighted (there will be no make-up midterm).

4. Final Exam (40%):
The final exam is cumulative and will be held during the final exam period, date TBA.
COURSE MATERIALS


The readings also include some additional journal and newspaper articles that relate to the material we are covering in class. Any additional course readings and course material will be posted online on LATTE.

Readings should be completed *prior* to the class for which they are assigned.

ACADEMIC HONESTY

You are expected to be honest in all of your academic work. Please consult Brandeis University *Rights and Responsibilities* for all policies and procedures related to academic integrity. Students may be required to submit work to TurnItIn.com software to verify originality. Allegations of alleged academic dishonesty will be forwarded to the Director of Academic Integrity. Sanctions for academic dishonesty can include failing grades and/or suspension from the university. Citation and research assistance can be found at *LTS - Library guides*.

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.

FOUR-CREDIT COURSE (WITH THREE HOURS OF CLASS-TIME PER WEEK)

Success in this 4 credit hour course is based on the expectation that students will spend a minimum of 9 hours of study time per week in preparation for class (readings, papers, discussion sections, preparation for exams, etc.).
# Overview of Lectures

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<td>Introduction and Supply and Demand Concepts</td>
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1. Introduction and Supply and Demand Concepts (Aug 31)
   Topics: course logistics; overview; intro to supply and demand concepts
   GLS 1, 2

2. Supply and Demand I (Sep 2)
   Topics: using demand and supply curves; consumer and producer surplus
   GLS 3

3. Supply and Demand II (Sep 9)
   Topics: government interventions; policy applications

4. Consumer Demand I (Sep 10)
   Topics: introduction to consumer demand analysis. Preferences, utility functions, MRS, budget constraints
   GLS 4

5. Consumer Demand II (Sep 16)
   Topics: consumer optimization; calculus based approach
   GLS 4 Online Appendix (on LATTE)

6. Consumer Demand III (Sep 21)
   Topics: income and substitution effects; deriving demand functions
   GLS 5

7. Firms: Production (Sep 29)
   Topics: the firm’s supply curve in the short run and the long run; entry and exit; introduction to production costs
   GLS 6
8. Firms: Costs (Sep 30)
   *Topics*: fixed, variable, and sunk costs; total, average, and marginal cost in the short run and long run; accounting cost vs. economic cost; economies of scale

   GLS 7

9. Competition: Perfect Competition (Oct 7)
   *Topics*: the firm problem and assumptions of perfect competition

   GLS 8

10. Competition: Monopoly (Oct 12)
    *Topics*: markets with a single firm; antitrust

    GLS 9


11. Competition: Market Power and Pricing (Oct 14)
    *Topics*: price discrimination; pricing strategies for firms with market power

    GLS 10


12. Competition: Oligopoly (Oct 19)
    *Topics*: markets with few firms; quantity setting; price setting; sequential vs. simultaneous actions

    GLS 11

13. Midterm Examination (Oct 21)

14. Decisionmaking under Uncertainty I (Oct 26)
    *Topics*: present discounted value and NPV

    GLS 13

15. Decisionmaking under Uncertainty II (Oct 28)
    *Topics*: expected value and expected utility; risk preferences

16. Game Theory I (Nov 2)
    *Topics*: types of games; Nash equilibrium; repeated games

    GLS 12

17. Game Theory II (Nov 4)
    *Topics*: sequential games; mixed strategies; applications
18. General Equilibrium Effects (Nov 9)
   Topics: Edgeworth box; efficiency in production; efficiency in markets; equity and efficiency

   GLS 14

19. Public Goods (Nov 11)
   Topics: public goods; private sector underprovision; local public goods and Tiebout

   GLS 16

20. Externalities (Nov 16)
   Topics: positive and negative externalities; property rights; government interventions

21. Asymmetric Information I (Nov 18)
   Topics: adverse selection and moral hazard; signaling and screening

   GLS 15

22. Asymmetric Information II (Nov 23)
   Topics: markets with adverse selection; policy responses


23. Equity Efficiency Tradeoffs (Nov 30)
   Topics: social welfare; equity efficiency tradeoffs


24. Economic Inequality (Dec 2)
   Topics: measuring inequality; facts about inequality and mobility


25. Behavioral Economics (Dec 7)
   Topics: departures from standard models; implications

   GLS 17

26. Summary and Review (Dec 9)