THE GEORGE WASHINGTON UNIVERSITY
Department of Economics
Microeconomic Theory I, ECON 8301.10
Fall 2015
Tuesdays 5:10-7:40 pm, Monroe B32 (lecture)
Tuesdays 7:50-9:20 pm, Monroe B32 (discussion)

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TEACHING ASSISTANT: Constantin Bürgi (Office Hours: Tu 9:00 am-noon, Monroe 374;
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GRADING ASSISTANT: Lifei Zhang (phoebezhang@gwmail.gwu.edu)

COURSE DESCRIPTION. This course will familiarize you with the building blocks of microeconomic theory,
focusing on models of single-agent optimization. The course will begin with a survey of unconstrained and
constrained optimization, and then turn to a detailed examination of models of the consumer and producer, and the
interaction of these two agents in monopoly and perfectly competitive markets. Topics such as welfare economics,
general equilibrium, imperfect competition and game theory will be covered in Micro II and Micro III.

LEARNING OUTCOMES. Upon completing this course, students will be able to: (1) use unconstrained and
constrained optimization to set up and analyze static economics models of the behavior of single agents; (2) use the
envelope theorem and comparative statics to analyze the effects of changes in an agent’s decision environment on
the agent’s welfare and optimal choices; (3) analyze and explain in rigorous terms the economic behavior of
consumers and producers and the implications of their behavior for the properties of demand and supply functions;
and (4) characterize equilibria in a perfectly competitive market and a monopoly market.

COURSE STRUCTURE. I will lecture on Tuesdays from 5:10–7:40 pm and the graduate teaching assistant will
lead a discussion section from 7:50–9:20 pm on the same day. The discussion section will review important
concepts relevant for the course as well as review problems and solutions.

REQUIREMENTS AND GRADING. There will be problem sets assigned nearly every week. The assignments
will be collected and graded. Typically, problem sets will be posted on Wednesday morning and will be due by the
start of the discussion class on Tuesday of the following week. You can work on assignments in groups of no more
than four students, but answers need to be written up individually using your own words, equations, and
diagrams. You cannot copy, or duplicate, answers from a classmate, even if you are in the same group. Copying
answers from a classmate or from an answer key found online or elsewhere is considered plagiarism and will be
dealt with as such—see Academic Integrity below. Each assignment will be graded on a zero, check-, check, check+
basis.

A midterm exam and a final exam will be given. The midterm exam is scheduled for the evening of Friday, October
16th; the precise time and location will be announced later. The final exam is scheduled for Tuesday, December 15th
during our regular class time; note that this date falls within the final exam period. The last lecture is on Tuesday,
December 1st (Tuesday, December 8th is a designated Thursday).

Course grades will be calculated using the following weights:

Math Camp Final – 5%
Problem Sets – 15%
Midterm – 40%
Final – 40%
CLASS POLICIES.  (1) There will be no make-up midterm exam. With prior approval from me or valid documentation, the weight of the midterm will be added to the final exam. Without prior approval or documentation, a score of zero will be given for the midterm exam. Prior approval must be obtained from me at least one week before the midterm exam. Prior approval will be granted for situations such as absences because of family emergencies or work-related travel, provided supporting documentation is presented. (2) The final exam is mandatory. (3) Answers to problem sets will not be accepted or graded if they are not submitted on time. However, the lowest score on a problem set will be dropped when computing your grade.

IMPORTANT DATES.  Friday, September 25th is the last day to withdraw from a course and add another GW course in its place without incurring an academic penalty. If you are simply withdrawing from a course and not adding another GW course, the schedule for tuition refunds can be found at http://registrar.gwu.edu/withdrawals-refunds.

Friday, October 23rd is the last day to withdraw from a course with a grade of 'W' using the RTF-EZ form or to change grade mode with the Dean's permission.

ACADEMIC INTEGRITY. The George Washington University is guided by the standards of academic integrity. Students are reminded to honor the Code of Academic Integrity, which can be viewed at http://studentconduct.gwu.edu/code-academic-integrity.

If you are not familiar with the Code, you should read through it carefully.

DISABILITY SUPPORT. Students who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office (Tel. 202-994-8250) to establish eligibility and to coordinate reasonable accommodations. For additional information see: http://gwired.gwu.edu/dss/.

COUNSELING. The University Counseling Center (Tel. 202 994-5300) offers 24/7 assistance and referral to address students' personal, social, career, and study skills problems. Services for students include: crisis and emergency mental health consultations, confidential assessment, counseling services (individual and small group), and referrals. For more information see: http://counselingcenter.gwu.edu/access-counseling-services.

SECURITY. In the case of an emergency, if at all possible, the class should shelter in place. If the building that the class is in is affected, follow the evacuation procedures for the building. After evacuation, seek shelter at a predetermined rendezvous location.

TOPICS AND READINGS. A tentative list of topics to be covered and accompanying readings are presented below. The textbooks for the course are:


There is a website for JR that lists errata and has a forum in which solutions to some of the end-of-chapter problems are posted. The URL for the website is: http://alfred.objectis.net/. Unfortunately, new user registration for the website has been suspended, for an unspecified period, so the website cannot be accessed unless you happen to already be registered.

Though it is not a required textbook for the course, you may find the following textbook to be useful. It provides a more elementary and application-oriented introduction to graduate-level microeconomic theory. It can help you develop a better feel for microeconomic theory.

Please note that these authors have another textbook with a very similar title, but it is an undergraduate textbook.

A broad outline of the topics that we will cover is provided below. For some topics, additional readings (not listed below) will be required and made available over the course of the semester, either in class or on Blackboard.

**Topic 1: Introduction**

**Topic 2: Optimization**
*Overview* (HV: Chapters 26 and 27)
*Preliminaries* (JR: A1; Blackboard readings: on proofs, quasiconcavity & quasiconvexity, homotheticity)
*Unconstrained Optimization* (JR: A2.1-2.2)
*Constrained Optimization* (JR: A2.3; Sundaram: Chapter 6; Blackboard readings)
*Theorem of the Maximum, Envelope Theorem and Comparative Statics* (JR: A2.4; Riley:1.3; HV: Chapter 27)

**Topic 3: Theory of the Consumer**
*Preferences and Utility* (JR: 1.1-1.2)
*Consumer’s Decision Problem* (JR: 1.3)
*Indirect Utility and Expenditure* (JR: 1.4)
*Properties of Demand* (JR: 1.5; HV 8.1-8.4)

**Topic 4: Topics in Consumer Theory**
*Integrability* (HV: 8.5; MWG: 3.H)
*Measures of Welfare Change* (HV: 10.1-10.5; Freeman reading)
*Revealed Preference* (JR: 2.3, HV: 8.7-8.8)

**Topic 5: Theory of the Producer**
*Production* (HV: Chapter 1)
*Profit Functions* (HV: 2.1-2.4, Chapter 3)
*Cost Functions* (HV: 4.1-4.4, Chapter 5)
*Duality* (HV: Chapter 6)

**Topic 6: Partial Equilibrium**
*Perfect Competition* (HV: Chapter 13, skip 13.11)
*Monopoly* (HV: 14.1-14.3)
*Monopolistic Competition* (JR: 4.2.3)

Note: “Sundaram” refers to the textbook by Rangarajan Sundaram, *A First Course in Optimization Theory*, Cambridge University Press, 2006, which is listed as a recommended text on the Math Camp syllabus; “Riley” refers to the textbook by John Riley, see the next page; “MWG” refers to Mas-Colell, Whinston and Green, see the next page. These readings, along with the “Freeman reading,” will be posted on Blackboard.
OTHER RESOURCES. There are numerous other resources that students can draw on to strengthen their understanding of the material covered in this course. I would urge you to sample these to see what might prove useful to you. I list a few below, but Google, as well as colleagues, will turn up many others.

Textbooks


An unusual, advanced undergraduate microeconomic theory textbook by Preston McAfee can be found at http://www.mcafee.cc/Introecon/. It contains material that is often not covered in a standard microeconomics course.

My favorite intermediate-level, undergraduate textbook is David Besanko and Ronald Braeutigam’s Microeconomics, Wiley. It provides a nice blend of analytical thinking and intuition.


Lecture Notes & Problems

A compendium of graduate-level lecture notes available online can be found at:

http://econphd.econwiki.com/notes.htm

Material from Ted Bergsrom’s Micro I course at UC Santa Barbara can be found at:


The materials from MIT’s Micro I course can be downloaded from its Open Courseware site:

http://ocw.mit.edu/courses/economics/14-121-microeconomic-theory-i-fall-2005/