MICROECONOMIC THEORY AND POLICY
(Summer 2018)

Course Number: 440.601
Instructor: Ahmed Saber Mahmud
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Office Hours: Specific Time and Date will be announced later
Course Website: Blackboard

Microeconomic theory pervades as the basic theoretical framework upon which the remaining disciplines of economics is built on. The present course provides the basic analytical tools related to microeconomics that is used in policy analysis. This course is intended for a graduate student who is interested in pursuing a career in public policy-making.

This comprehensive course covers theories related to consumer decision-making, the theory of the firm, partial equilibrium, general equilibrium, welfare economics, imperfect competition, game theory, decisions under risk and uncertainty and finally market imperfections involving externalities.

Prerequisites:
It is necessary that students are taking this course be sufficiently well versed in calculus, linear algebra, and introductory microeconomics. There may be individual cases when without such prerequisites, a student may follow the materials but these are rare instances. A rigorous course in graduate microeconomics demands basic training in mathematics.

Readings:
The main text for lecture material is:
Walter Nicholson and Christopher Snyder, "Microeconomic Theory: Basic Principles and Extensions", 11th Edition. It should be available at the Campus Store.

We will focus exclusively on this particular text. Although we are using the latest edition, the earlier ones will probably suffice as well. However, the page numbers and numbering of homework problems will differ.

For your discussion questions, please read:
Steven E. Landsuburg, "The Armchair Economist"

For a less mathematical introduction to the subject, you may want to take a look at:
Microeconomics
by Michael Katz (Author), Harvey Rosen (Author)

Homework:
Problems from each unit will be assigned (from the book, 11th edition). You are expected to turn in the assigned homework. Homework will be graded, and solutions will be

discussed. These problem sets will help you to prepare yourself for the exams. Students are encouraged to form groups in solving these problems. *The assignments could be submitted as a group (not exceeding 3) as well.*

Assignment 1: 2.1, 2.2, 2.7, 2.11, 3.1, 3.2, 3.5, 3.10, 3.13, 4.1, 4.2, 4.5, 4.10, 4.11, 4.13
Assignment 2: 5.1, 5.2, 5.4, 5.5, 6.1, 6.10, 9.1, 9.5, 9.8, 10.2, 10.3, 10.6, 10.
Assignment 3: 11.1, 11.3, 11.5, 11.7, 12.1, 12.3, 12.5, 12.7, 12.8
Assignment 4: 13.1, 13.2, 13.5, 13.6, 13.11, 7.4, 7.5, 7.7
Assignment 5: 8.1 (a, d), 8.3 (except d), 8.4, 14.2, 14.5, 14.6, 14.7, 15.1, 15.2, 15.4, 15.5

(Due dates are in the section "Assignments")

Exams:
There will be one prelim and one final. None of the exams will be cumulative. However, material from the previous exam will act as a foundation for the latter ones. You will be graded not only based on the answers to the questions on the exam but also on how you derived them. This will allow me to give partial credits when possible.

Midterm will be held on-line between July 7, 5:00 PM and July 8, 5:00 PM 5 PM. Midterm will be based on Units 1, 2, 3, 4, 5 & 6 and Assignments 1, 2 & 3.

Final will be held on-line between August 18, 5:00 PM and August 19, 5:00 PM. Final will be based on Units 7, 8, 9, 10 & 11 and Assignments 4 & 5.

Late Policy
Homework assignments can be submitted up to a week after the due date. However, late homework will be discounted 10% points of the homework grade. No credit will be awarded for homework over the week late.

Exams must be turned in by the due date. Late exams will not be accepted without prior arrangement and discussion with the instructor.

Discussions:
There will be a discussion topic from each unit and you be graded based on your answers.

Course Grade:
25% Homework
35% Midterm
35% Final
5% Discussions

Grades will be mostly based on exams, discussions, and homework. However, some extra points may be reserved for students who have asked interesting questions.

Classroom Interactions:

Since the course is entirely online, there are several methods of interacting with your fellow students and me:

-E-mail: you can send me or your classmates an e-mail from Blackboard.

-We will be holding online office hour where you can ask me questions. I will post the recorded office hours for others who could not participate.

- There is a separate section "Discussions" where a specific question is asked. You can post your answer or respond to others.

Course Description:

Unit 1: Introduction and Math Review
Readings: Chapter 1 & 2

We basically discuss how microeconomics evolved over the years to the present state. Next we move on to a brief review of math. The math review covers, calculus, optimization with one or more than one variables, the necessary and sufficient conditions of maximization, a little bit of matrix algebra and implicit function rule.

Unit 2: Utility Functions and Maximization
Readings: Chapter 3 & 4

Different shapes of utility functions are discussed. Afterwards, we move to utility maximization and the necessary and sufficient conditions of it. We also define and show how to calculate indirect utility and expenditure functions. This lecture will exemplify how mathematical tools developed in the first lecture become useful.

Unit 3: More on Utility
Readings: Chapter 5 & 6

The discussion on utility functions continues. We illustrate graphically and mathematically the difference between income and substitution effects. We also define complementarity and substitutability among goods.

Unit 4: Production and Cost Functions
Readings: Chapter 9 & 10

Now, we focus on how goods are produced from inputs. The two concepts related to production are cost and production functions. We discuss various production functions in some details and take a look at the difference between long and short-run cost functions for a firm.

Unit 5: Profit Maximization
Readings: Chapter 11 & 14

We continue with the theory of the firm and now we look at how firms allocate their resources to produce goods. A firm in neoclassical model is profit maximizing. We discuss this optimization process in the context of competitive and non-competitive markets.

Unit 6: Partial Equilibrium
Readings: Chapter 12

At this point, we combine the two threads of our discussions – consumers and producers to see how markets really work together. In other words, we see how supply (producer's response) and demand (the need of the consumer) respond to each other. We concentrate on one market only.

Unit 7: General Equilibrium
Readings: Chapter 13

In partial equilibrium models, only one market clears. Reality consists of many such markets that are interrelated. How such multitude of exchange clears is the topic of this lecture. It is called general equilibrium denoting the how all the markets are cleared simultaneously.

Unit 8: Uncertainty and Information
Readings: Chapter 7
Unlike the fictitious market model described above, the real world is plagued by risk and uncertainty. At this point, we discuss how a rational consumer handles risk and uncertainty. While doing so, we define a risk-averse person and introduce the economics of information

Unit 9: Strategy and Game Theory
Readings: Chapter 8

Over the years, Game Theory has evolved as a separate discipline and has introduced us to a whole new set of tools and a novel way of thinking to understand the surrounding world. In this brief introduction, we discuss Nash Equilibrium, Sequential games, and Repeated games.

Unit 10: Imperfect Competition
Readings: Chapter 14 & 15

The equilibrium conditions of imperfect market markedly differ from the previously discussed perfect competition. In these two chapters, we discuss the origins of monopoly,

and the reason behind price discrimination among consumers. We also address the issue of oligopoly and monopolistic competition – the two other important variants of imperfect competition.

Unit 11: Asymmetric Information
Readings: Chapter 18

We discuss adverse selection and moral hazard where one agent has better access to information than the other.

General

This course adheres to all University policies described in the academic catalog. Please pay close attention to the following policies:

Students with Disabilities

Johns Hopkins University is committed to providing reasonable and appropriate accommodations to students with disabilities. Students with documented disabilities should contact the coordinator listed on the Disability Accommodations page. Further information and a link to the Student Request for Accommodation form can also be found on the Disability Accommodations page.

Ethics & Plagiarism

JHU Ethics Statement: The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of assignments, improper use of the Internet and electronic devices, unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition. Report any violations you witness to the instructor.

Read and adhere to JHU's Notice on Plagiarism.

Dropping the Course

You are responsible for understanding the university's policies and procedures regarding withdrawing from courses found in the current catalog. You should be aware of the current deadlines according to the Academic Calendar.

Getting Help

You have a variety of methods to get help on Blackboard. Please consult the resource listed in the "Blackboard Help" link for important information. **If you encounter technical difficulty in completing or submitting any online assessment, please immediately contact the designated help desk listed on the AAP online support page**. Also, contact your instructor at the email address listed in the syllabus.

Copyright Policy

All course material are the property of JHU and are to be used for the student's individual academic purpose only. Any dissemination, copying, reproducing, modification, displaying, or

transmitting of any course material content for any other purpose is prohibited, will be considered misconduct under the JHU Copyright Compliance Policy, and may be cause for disciplinary action. In addition, encouraging academic dishonesty or cheating by distributing information about course materials or assignments which would give an unfair advantage to others may violate AAP's Code of Conduct and the University's Student Conduct Code. Specifically, recordings, course materials, and lecture notes may not be exchanged or distributed for commercial purposes, for compensation, or for any purpose other than use by students enrolled in the class. Other distributions of such materials by students may be deemed to violate the above University policies and be subject to disciplinary action.

Code of Conduct

To better support all students, the Johns Hopkins University non-academic Student Conduct Code has been integrated and updated to include all divisions of the University. In addition, it is important to note that all AAP students are still accountable for the Code of Conduct for Advanced Academic Programs.

Title IX

Confidentiality and Mandatory Reporting

As an instructor, one of my responsibilities is to help create a safe and inclusive learning environment on our campus. I also have mandatory reporting responsibilities related to my role as a Responsible Employee under the Sexual Misconduct Policy & Procedures (which prohibits sexual harassment, sexual assault, relationship violence and stalking), as well as the General Anti-Harassment Policy (which prohibits all types of protected status based discrimination and harassment). It is my goal that you feel able to share information related to your life experiences in classroom discussions, in your written work, and in our one-on-one meetings. I will seek to keep information you share private to the greatest extent possible. However, I am required to share information that I learn of regarding sexual misconduct, as well as protected status based harassment and discrimination, with the Office of Institutional Equity (OIE). For a list of individuals/offices who can speak with you confidentially, please see Appendix B of the JHU Sexual Misconduct Policies and Laws.

For more information on both policies mentioned above, please see: JHU Relevant Policies, Codes, Statements and Principles. Please also note that certain faculty and other University community members also have a duty as a designated Campus Safety Authority under the Clery Act to notify campus security of certain crimes, as well as a duty under State law and University policy to report suspected child abuse and/or neglect.