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# Economics 4001.02: Intermediate Microeconomics

# Spring 2024

This is an intermediate level microeconomics course (calculus based), which is meant for students who are familiar with basic concepts in calculus. This course will provide you with the basic mathematical tools necessary to tackle economic problems in a systematic way, and develop basic economic intuitions that can help you understand economic puzzles or policy problems. These two goals are inherently linked: the first provides a general analytical framework to think about the world around you and the second develops intuitions from that framework. Those of you who intend to pursue further studies in economics will require the tools developed in this class for later course work, while those with only a casual interest in economics, I hope, will be able to use the intuitions from this course to make more sense of the world around you.

# Required Text:

Jeffrey M. Perloff, *Microeconomics: Theory and Applications with Calculus*, 5th edition, Addison-Wesley.

The text will provide the basic framework for this course, but my lecture notes will be supplemented by substantial materials not covered in the text.

# Grading:

Your course grade will be computed as follows: 5% class participation, 20% Homework, 30% Midterm Exam, 45% Final Exam. There will be (roughly) bi-weekly homework assignments, which will be graded by your course TA. No late homework will be accepted. No make-up exam for the midterm will be given; students who have a preapproved excuse for missing the midterm will have the final exam counted for 75% of the grade.

## **My Office Hours:**

Wednesdays10:00AM--Noon on Zoom (ID: 657 546 5233, Passcode: 572912)

# **Course TA:**

Name: Han Wang

Email: wang.12716@buckeyemail.osu.edu

Office Hours: Mondays 9:00--10:00AM, Arps 371

#### **Course Website:**

I will post important class announcements and teaching materials (lecture notes, homework, homework solutions) to the course website via Carmen. Please check the course website regularly for updated class information.

# **Course Outline (tentative):**

# 1. Introduction (Ch. 1)

Course overview, allocation of scarce resources, introduction to constraint optimization, equilibrium analysis, comparative statics analysis; review of calculus.

# 2. Supply and Demand (Ch. 2)

Demand/supply function, market equilibrium, elasticities, applications of supply and demand analysis.

# 3. Consumer Theory (Ch. 3-5)

Preferences, indifference maps/curves, utility functions, marginal utilities, marginal rate of substitution, budget constraint, utility maximization, expenditure minimization, demands, effects of an increase in income, effects of a price increase, substitution and income effects, deriving labor supply curve, consumer surplus, applications.

# 3. Production Theory (Ch. 6-7)

Production functions, isoquant, marginal rate of technical substitution, marginal and average products, elasticity of substitution, return to scale; opportunity costs, economic costs, marginal costs, cost minimization, input demand, cost function; long-run vs. short-run.

#### 4. Perfect Competition (Ch. 8-9)

Perfect competition, profit maximization, short-run, long-run equilibrium, producer surplus, applications: using the perfect competition model to analyze public policy interventions.

#### 5. General Equilibrium (Ch.10)

Competitive equilibrium in two interrelated markets, exchange economy with two people, competitive exchange, production and trading, efficiency and equity.

# 6. Market Structures Other than Perfect Competition (Ch. 11, 13)

Monopoly, monopoly profit maximization, welfare effect of monopoly; Introduction to game theory and oligopoly analysis.

#### Academic misconduct:

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <a href="https://studentlife.osu.edu/csc/">http://studentlife.osu.edu/csc/</a>.

# **Religious accommodations:**

It is Ohio State's policy to reasonably accommodate the sincerely held religious beliefs and practices of all students. The policy permits a student to be absent for up to three days each academic semester for reasons of faith or religious or spiritual belief.

Students planning to use religious beliefs or practices accommodations for course requirements must inform the instructor in writing no later than 14 days after the course begins. The instructor is then responsible for scheduling an alternative time and date for the course requirement, which may be before or after the original time and date of the course requirement. These alternative accommodations will remain confidential. It is the student's responsibility to ensure that all course assignments are completed.

#### Mental health:

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th Floor of the

Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at  $\underline{614-292-5766}$  and 24 hour emergency help is also available 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

# Disability services:

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

If you are isolating while waiting for a COVID-19 test result, please let me know immediately. Those testing positive for COVID-19 should refer to the <u>Safe and Healthy Buckeyes site</u> for resources. Beyond five days of the required COVID-19 isolation period, I may rely on Student Life Disability Services to establish further reasonable accommodations. You can connect with them at slds@osu.edu; 614-292-3307; or slds.osu.edu.