Economics 253: Intermediate Microeconomics
Spring 2022

Syllabus

February 18, 2022

Instructor: Dr. Alexandr Moskalev
(he/him/his)
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Class: Monday, Wednesday, & Friday, 3:30 pm to 4:20 pm, King 243

Office Hours: Monday 12:00 - 1:00 pm, Rice Hall 210   *and by appointment.*
Wednesday 4:30 - 5:30 pm, Rice Hall 210
Friday 12:00 - 1:00 pm, Rice Hall 210

Please check https://alexmoskalev.com/officehours for any changes and to request an appointment.

Teaching Assistant: Zimu Liu
zliu@oberlin.edu

Review Session: Sunday, 3:00 pm to 4:15 pm, King 123

Review sessions are optional, but you will practice, learn more material, and earn course participation points if you go.

Course Description: Economics 253 (Intermediate Microeconomics) introduces students to decision-making by individual rational economic agents (individuals, households, firms, or governments). We will focus our attention on describing the respective problems those kinds of agents have, approaches to finding optimal solutions, properties of those solutions, and the resulting market interactions. This course builds upon the intuition introduced in Economics 101 and makes use of more advanced mathematics to build succinct mathematical models. The goal of this course is to help students to develop mastery of the mathematical framework of microeconomics that focuses on individual agents' interactions, and to practice the corresponding analytical skills. The course serves as a prerequisite for more advanced economics courses (Microeconomic Theory), and it is helpful for students interested in describing real-life phenomena using quantitative models.

Learning Goals:

- To understand the theory behind models of consumer behavior, firm behavior and game theory.

- To master algebraic and calculus tools needed to work with these models and to understand policy implications.

- To apply concepts to new and possibly unfamiliar real-world situations.

- To understand how microeconomics acts as a fundamental foundation for further 300-level and 400-level courses.

Prerequisites: You must have completed Principles of Economics (Economics 101 or 102), and you must have calculus proficiency at the MATH 133 level. You have to know how to take a derivative of a function and what that derivative represents, basics of constrained optimization, linear algebra (solving systems of linear equations), and be fluent with algebraic manipulations.

If you are unsure about your mathematical abilities, please come to office hours early in the course (before the add/drop deadline) to discuss the best course of action.

Readings: I will follow Hal R. Varian, "Intermediate Microeconomics", 9th edition (ISBN: 978-0-393-12396-8). This is a required reading for this course. You do not need to have the latest edition, but you will have to map the chapters/topics yourself. This book has a supplemental book of problems and exercises (ISBN-13: 978-0-393-92261-5) that you might find useful for additional practice. I may use some problem ideas from this book for problem sets.

Grading: Letter grades will be based on a curve of students' total points. The curve will be based on what I deem an appropriate reflection of students' performance.

I will use the following components for grading purposes:

20%	🏠	Homework
20%	📝	Midterm I
20%	📝	Midterm II
25%	📜	Final
15%	⭐	Class participation

Homework: It will consist of 6 problem sets. To accommodate possible absences due to illness or other unforeseen factors, I will drop the lowest score. A non-submitted assignment results in a zero grade for it.

Class participation: Several components will be counted towards class participation points. Points earned by a student under class participation category will be capped at 15 (15% of the course grade).

- *Lecture attendance.* To measure lecture attendance and material comprehension, I will conduct occasional pop-up quizzes that will include a few basic questions/problems based on recently covered material. The quizzes will be "take-home" and due the same day. I will distribute unique *quiz-credit-codes* at respective lectures to identify students present. The quiz solution must be submitted alongside a valid *quiz-credit-code*. The maximum per quiz is 2 points. Submissions from students who missed the corresponding lecture are not eligible for credit.

- *Review session attendance.* TA will distribute unique *review-session-credit-codes* at review sessions to provide credit to students present. The distributed *review-session-credit-codes* need to be turned in for credit within a week. Each *review-session-credit-code* submitted on time gives you 0.5 points per review session. This subcategory is capped at 4 points in total.

- *Helping fellow classmates.* Students will receive non-credit study points that they can transfer to other students at their will. This is meant to reward students who are helping

other students with the course material and to improve opportunities of getting help. Points will be credited towards receiving party's class participation score using the posted conversion rate at the moment of the transfer. While all students will receive non-credit study points, low-performing students will receive a greater amount to have a higher chance of getting help. This subcategory is capped at 4 class participation points per receiving party in total.

- *Contributing to study guides.* Students will have an opportunity to submit a short study-guide-style lecture summary after each lecture, which is due the same day. Up to 3 such summaries per lecture will be included into the study guide. Authors of included summaries will share one participation credit per lecture for each lecture they were selected into the study guide. Submissions will be in plain-text/LaTeX format. This subcategory is capped at 6 points in total.

- *Math bootcamp.* One point for class participation may be assigned for attending Economics Math Bootcamp hosted by Hannah Kris.

Schedule: This is an approximation of the desired schedule. Actual topics and their dates may vary depending on how quickly we progress through the material.

Introduction	
Feb. 18 ⚠ *Learning Portal Registration*	Course information and requirements 📖 Syllabus 💻 *Class meetings and office hours will be remote on zoom for the first week. You need to be logged into your Oberlin zoom account to join. Please follow https://alexmoskalev.com/zoom to connect.* *Office hours this day will be remote as well.*
Feb. 21	Math Review 📖 Math Appendix 💻 *The class and office hours are remote, please use the link above.*
Feb. 23	Supply & Demand, Market Equilibrium 📖 Chapter 1 💻 *The class and office hours are remote, please use the link above.*
Consumer Theory	
Feb. 25	Budget Constraint, Consumer Preferences 📖 Chapters 2, 3
Feb. 28	Utility, Representation as a Utility Function 📖 Chapter 4
Mar. 2 ⚠ *HW 1 Due*	Consumer's Choice 📖 Chapter 5
Mar. 4	Demand 📖 Chapter 6
Mar. 7	Revealed Preference & Slutsky Decomposition 📖 Chapters 7, 8

Mar. 9   Revealed Preference & Slutsky Decomposition

📖 Chapters 7, 8

Mar. 11   Endowments, Intertemporal Budget Constraint

📖 Chapter 9

Mar. 14   Intertemporal Choice
⚠️ *HW 2 Due*   📖 Chapter 10

Mar. 16   Consumer's Surplus

📖 Chapter 14

Midterm I

Mar. 18   Review before Midterm
                    Prepare questions before class

Mar. 21   Midterm I (in class)

Theory of the Market

Mar. 23   Elasticity and Market Equilibrium

📖 Chapters 15, 16

Mar. 25   Policy Interventions: Taxes, Subsidies. Curve shifts

📖 Chapter 16

Theory of the Firm

Mar. 28   Technology

📖 Chapter 19

Mar. 30   Profit Maximization

📖 Chapter 20

Apr. 1   Cost Minimization, Duality
⚠️ *HW 3 Due*   📖 Chapter 21

Apr. 11   Cost Curves

📖 Chapter 22

Apr. 13   Firm Supply

📖 Chapter 23

Apr. 15   Industry Supply

📖 Chapter 24

Firm's Behavior in the Market

Apr. 18	Monopoly 📖 Chapter 25
Apr. 20 ⚠️ *HW 4 Due*	Monopoly, Price Discrimination 📖 Chapters 25, 26
Apr. 22	Price Discrimination 📖 Chapter 26

Midterm II

Apr. 25	Review before Midterm *Prepare questions before class*
Apr. 27	Midterm II (in class)

Firm's Behavior in the Market

Apr. 29	Price Discrimination 📖 Chapter 26
May 2	Game Theory Basics 📖 Chapter 29
May 4	Oligopoly 📖 Chapter 28
May 6	Oligopoly 📖 Chapter 28

Theory of the Market

May 9	Auctions 📖 Chapter 18
May 11 ⚠️ *HW 5 Due*	Auctions 📖 Chapter 18
May 13	Asymmetric Information 📖 Chapter 38
May 16	Asymmetric Information 📖 Chapter 38
May 18	Externalities 📖 Chapter 35 *(if time permits)*
May 20 ⚠️ *HW 6 Due*	Externalities, Public Goods 📖 Chapters 35, 37 *(if time permits)*

May 23   Public Goods
                  📖 Chapter 37
                  (if time permits)

Problem Sets: Problem sets and other graded assignments must be submitted electronically using https://students.alexmoskalev.com/ platform unless stated otherwise. You should have received your login instructions during the first lecture.

Please keep in mind the following instructions regarding problem sets, quizzes, and other online assignment submissions.

⏰ Please allow yourself enough time to submit the assignment. Uploads may be slow. Late assignments will incur 1-point-per-minute-of-delay penalty regardless of the reason.

⏱ The assignment submission time is the timestamp of the latest upload for that assignment. You may leave empty slots if you have not solved all parts of the assignment.

📕 Unless stated otherwise, only valid PDF-format files will be accepted. There is no explicit limit on file size, but you should keep your files under 32 MiB to ensure that uploads will not fail too often.

⏳ Extensions can only be granted before the deadline. You should use the electronic platform to apply for an extension. Some assignments cannot be extended. Assignments that can be extended will have a respective message if you have a positive extension balance.

✳ You should follow the prompted structure of a submission. For example, problem sets should be submitted problem-by-problem (separate files). This simplifies grading and saves time for the grading party. I and the teaching assistant may disregard all problems that were submitted using a wrong slot as well as submissions that include problems that should have been submitted elsewhere.

✏ Please write legibly. Any hard-to-read part of a submission may not receive credit.

🔧 If you think that something is broken, you should immediately contact me with the description of what is broken. Be ready to promptly respond to clarifying questions and to provide some technical details. If you delay, you may lose points for your submission or other activity that was interrupted.

🔨 The system is monitored to ensure accurate measurement of submissions' timestamps.

If a problem set or other graded assignment has a solution key posted, students should review their submissions to identify areas where they might benefit from seeking help at office hours and review sessions. Being proactive and reaching out soon if you need help pays greatly when the exam time comes.

If a problem set or other graded assignment is submitted in an alternative way without a prior approval (e.g. a problem set being emailed instead of being uploaded), then a 30% score deduction can be applied to that assignment. Submissions made in an irregular way lead to delays in grading, misplaced papers, lost files, and unnecessary extra time being spent on tracking them down for grading. Therefore,

it's best to follow a single systematic way.

Problem Sets Extensions: Some graded assignments will have an option to be extended. Each student will be granted a balance of 8 assignment-extension-days. All extensions must be processed electronically and prior to the deadline at https://students.alexmoskalev.com/. There is no need to email me about that. If an assignment is extendable and you have a positive balance of assignment-extension-days, you will see a respective option next to the assignment. Concurrent extensions will use the credit separately. Once you used all assignment-extension-days, you will not be able to extend any assignments. Please use the balance wisely.

Midterm Regrade Requests: For the midterm, you must submit a regrade request within 10 days of distributing the graded midterm workbooks in class. After carefully reviewing the posted midterm solutions and comparing it to what you have written directly in your midterm, you must provide a three-paragraph explanation: one paragraph detailing how your written answer is similar to the posted solutions, another paragraph detailing how your written answer differs from the posted solutions, and a final paragraph explaining why the awarded points do not accurately reflect your score. Your regrade request must be submitted to me in hard copy. After submission, I will reply within a week to your regrade request in an email. I also may decrease the number of points awarded on your exam to accurately reflect your score if I discover that some parts were mistakingly given points.

Midterm Make-Up: No make-up midterms will be offered. Please be aware that midterm dates are set well in advance and are available in this Syllabus. The current plan is to have in-class midterms, so I assume that you are available during the respective dates/times. If at the start of the term you have travel plans preventing you from taking a midterm, I suggest you to drop this class or change your travel schedule. Travel schedule conflicts (including last minute changes/reservations) are not considered valid excuses.

A missed midterm will result in a zero point score for it. In an exceptional circumstances with a valid excuse, I may consider reweighing your Final Exam score to partially account for a missed midterm.

My Role as Instructor: As an Instructor, I am not only responsible for helping you understand economic concepts, I am also an advocate in place to protect and enhance your learning experience. If there are issues with any parts of the class (and especially with parts that may be changed quickly and easily), please let me know.

Email Communication: I will try to respond to emails within 24-hour period during work days. To ensure that your emails are going to be marked correctly and processed smoothly, please send those from your @oberlin.edu address. Be aware that during the days immediately before any midterm or exam you may not get a timely response from me due to peaking number of emails. Please plan and study ahead. Before sending an email to me, check the course syllabus thoroughly (use the latest online version to find TBD/TBA information). In a case of multiple emails from one person in a short period of time or a difficult question asked, I also reserve a right to transfer the conversation to office hours.

I assume that emails sent to your @oberlin.edu address are read in a timely fashion. You may receive class-wide notifications as well as individual messages related to class activities, assignments submitted, midterms/final exam arrangements, etc. I also assume that your email box is secure since messages may contain details about your performance in the course and personal links to access course-related resources.

Electronic Devices: Please refrain from the use of cell phones, tablets, laptops, and any other electronic devices during the class time. You should also switch your devices into silent mode. Students with documented disabilities may receive a permission to use a device that is instrumental to their learning. Photography, voice, or video recordings of the class are not permitted without the instructor's consent.

Honor Code: Academic Integrity is of utmost importance for maintaining a high-trust Academic Environment. I expect all students to be familiar with and follow Oberlin's Honor Code.

Religious Holidays: I adhere to Oberlin's Religious Holiday Observance Policy. Please let me know about any schedule conflicts that might affect your activity in this class as soon as possible.

Students with Disabilities: If you have a disability that requires an accommodation, please let me know as soon as possible. You will need to arrange for it through the Student Accessibility Services. Please contact the Student Accessibility Services right away to start the documentation process. If you substantially delay your request, I may not be able to make necessary arrangements.

Disclaimer: I may adjust the syllabus if I believe it will serve the learning needs of the class. During the term, I may make statements about specific assets and asset classes, economic phenomena, behaviors of markets, firms and individuals, give opinion in relation to current/past events, and, among other things, discuss how certain situations will evolve or could have evolved under different sets of circumstances. Any information, idea, opinion, or other impression you get from this class should only be used for subject learning purposes and should not be considered an advice.

Acknowledgements: I'm grateful to Ron Cheung and Siyu Pan for their assistance in the preparation of this course. This and other course-related documents may use Emoji graphics licensed under CC-BY 4.0: https://creativecommons.org/licenses/by/4.0/ Copyright 2022 Twitter, Inc and other contributors.