Economics 353: Microeconomic Theory
Fall 2021

Syllabus

October 1, 2021

Instructor:	Dr. Alexandr Moskalev
	(he/him/his)
	moskalev@oberlin.edu
Class:	Tuesday & Thursday, 11:00 am to 12:15 pm, King 337
Office Hours:	Tuesday 4:30 - 5:30 PM, Rice Hall 210 *and by appointment.*
	Wednesday 2 - 4 PM, Rice Hall 210
	Thursday 1 - 2 PM, Rice Hall 210

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

Course Description: This course is meant to introduce students to topics and problems they could see during the first year of an Economics Ph.D. program. We will cover the theory of the firm and consumer, the effects of uncertainty on optimal decisions, a few game theory concepts, dynamic programming, and microeconomics of imperfect information.

Prerequisites: The course features extensive use of linear algebra, multivariate calculus, and microeconomic theory (at intermediate level). I expect you to be proficient with the material covered in those courses (Econ 253, Math 231, Math 232) and to be able to review your notes/lectures/books if needed. The Mathematics Background appendix in the course textbook should give you an idea of Math level we will be using in this class.

Readings: The topics in this course are closely aligned with the book *Microeconomics: Principles And Analysis* (Oxford University Press, 2005) by Frank Cowell. This is a required reading for this course. The book presents material in a concise manner with a great use of diagrams, contains a robust mathematical appendix, and provides a nice selection of problems for a reader.

Over the course of the semester, I will update the anticipated schedule in this syllabus to clarify the required chapters and to enrich the reading list with additional materials.

Grading: I will use the following components for grading purposes:

Homework: will consist of 4 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. Homework assignments are meant to give students exposure to the different types of problems in the field. A diligent work on homework assignments typically pays off in a better exam experience.

Class participation: To measure class participation I will conduct 2 – 3 "pop-up quizzes" that will include a few basic questions/problems based on recently covered material. Additional

20% 🏡 Homework

30% 📝 Midterm

40% 📄 Final

10% ⭐ Class participation

points for class participation may be assigned for attending calculus refresher. Points earned by a student under class participation category will be capped at 10 (10% of class grade).

Schedule:

Introduction

Oct. 5   Constrained Optimization
📖 A.7

Oct. 7   Constrained Optimization
📖 A.7

The Firm

Oct. 12   Cost Minimization
📖 Chapters 2.1-2.2

Oct. 14   Cost Function Properties, Optimal Choice of Output
📖 Chapters 2.1-2.2

Oct. 19   Comparative Statics
📖 Chapters 2.3

The Consumer

Oct. 21   Preference Representation
📖 Chapters 4.1-4.4

Oct. 26   Consumer Optimization
📖 Chapters 4.5

Oct. 28   Welfare
📖 Chapters 4.6

Uncertainty and Risk

Nov. 2
⚠️ *HW 1 Due*   Consumption Decisions under Uncertainty
📖 Chapters 8.1-8.2

Nov. 4   Preferences under Uncertainty
📖 Chapters 8.3

Nov. 9   Risk Aversion and Lotteries

📖 Chapters 8.4-8.5

Nov. 11   Trade, Individual Optimization

📖 Chapters 8.6-8.7

Midterm

Nov. 16   Review before the Midterm
⚠️ *HW 2 Due*

Nov. 18   Midterm in class

Strategic Behavior

Nov. 30   Pure Strategies

📖 Chapters 10.1-10.2

Dec. 2   Mixed Strategies

📖 Chapters 10.3-10.4

Dec. 7   Finite Horizon Games

📖 Chapters 10.5-10.6

Dec. 9   Infinite Horizon Games

📖 Chapters 10.5-10.6

Dynamic Programming

Dec. 14   Finite Horizon

Dec. 16   Infinite Horizon
⚠️ *HW 3 Due*

Dec. 21   Infinite Horizon

Information

Jan. 4   Adverse Selection

📖 Chapters 11.1-11.2

Jan. 6   Adverse Selection, Signaling

📖 Chapters 11.2-11.3

Jan. 11   Signaling, Hidden Actions

📖 Chapters 11.2-11.4
(if time permits)

Jan. 13   Signaling, Hidden Actions
⚠️ *HW 4 Due*
📖 Chapters 11.2-11.4
(if time permits)

Final Exam

Jan. 21   A take-home Final Exam (non-cumulative)
⚠️ *Final Exam*

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 is different than 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.

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 e-mails 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 last days before any exam or midterm you may not get an answer from me due to peaking number of email. 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.

Electronic devices: Please refrain from the use of cell phones, tablets, laptops, and any other electronic devices during 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 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 this through the Student Accessibility Services.

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 Viplav Saini for his assistance in preparation of this course.

Mode of instruction: The course is slated for an in-person mode of instruction for the most part. The College provides an opportunity for students to take and for faculty to conduct classes remotely in January 2022.