

Microeconomic Analysis

ECON 641
Master of Science Program in Applied Economics
University of Maryland - College Park, Washington DC Location
Spring 2021

Instructor:	Dr. Aaron Finkle
Email:	afinkle@umd.edu
Meetings link:	See https://www.elms.umd.edu/
Meeting Times:	Tuesdays 6:45p-7:30 and 8:00p-8:45
Office Hours	Sundays 2pm-3pm and other times by appointment
TA:	Camila Andrea Galindo Pardo
TA Email:	cgalindo@umd.edu
TA Office Hours	Mondays 5:45p-6:30

1 Overview

This course covers microeconomic analysis applied to public policy problems with an emphasis on practical examples and how they illustrate microeconomic theories. Policy issues such as pollution, welfare and income distribution, market design, industry regulation, price controls, tax policy, and health insurance are used to illustrate the abstract principles of microeconomics.

Students will master microeconomic theory at a level of mathematical rigor befitting a professional master's program in applied economics. The level of mathematical rigor will be higher than in a typical undergraduate intermediate microeconomics course, but much lower than in the first year of a "top 40" economics PhD program like the University of Maryland's. We will make extensive use of differential calculus. Students will apply microeconomic theory to a broad range of questions relevant to public policy.

1.1 Website

Copies of the course syllabus, your grades, and other relevant links and documents will be posted on the course's ELMS/Canvas website. You can access the site via www.elms.umd.edu. You will need to use your University of Maryland "directory ID" and password.

Class will be held via Zoom which will be linked to on the ELMS page. Students will need to sign in either by using the web app through ELMS, or using the SSO sign in with the Zoom app using the umd.edu login and two-factor authentication. Zoom meetings will be recorded.

1.2 Email

The University has adopted email as the primary means of communication outside the classroom, and I will use it to inform you of important announcements. Students are responsible for updating their current email address via <http://www.registrar.umd.edu/current/> (Under the first major heading of "Online Transactions" there is a link to "Update Contact Information".)

1.3 Prerequisites

Admission to the Master of Professional Studies in Applied Economics program. Note: The program admissions requirements include a grade of at least B in an introductory microeconomics course and a grade of at least B in an introductory calculus course.

2 Required Text and Supplementary Material

The required text for this course is:

- Jeffrey Perloff, *Microeconomics: Theory and Applications with Calculus, 5th edition*. 2020 Pearson, ISBN13: 9780134167381

It is important you buy the version that has “**with Calculus**” in the title as the non-calculus version is quite different in notation. While earlier editions are mostly similar, if you choose to use an earlier edition, you are required to check for any relevant differences by comparing the table of contents.

Additionally, presentations during the semester will cover applications from the following textbooks:

- Walter Nicholson and Christopher Snyder, *Intermediate Microeconomics and Its Application 12th edition*. 2014 Cengage.
- Austan Goolsbee, Steven Levitt, Chad Syverson, *Microeconomics Second Edition*, 2016 MacMillan.

I will provide the readings from these for you via ELMS.

Another useful online resource for review of Calculus is Kahn Academy

- Tutorial on Differential Calculus
www.khanacademy.org/math/differential-calculus
- Applications “Skill Check” on Optimization
www.khanacademy.org/math/differential-calculus/derivative-applications

3 Course Objectives

The program has 7 general learning outcomes for students:

1. Ability to understand, evaluate and analyze economic data
2. Ability to understand and interpret statistical evidence from economic data
3. Ability to apply empirical evidence to assessing economic arguments
4. Ability to apply macroeconomic theories to policy discussions
5. Ability to apply microeconomic theories to policy discussions
6. Ability to communicate economic ideas to a broader audience
7. Ability to evaluate the effectiveness of policy programs using sound economic techniques

The learning outcomes that pertain to ECON 641 are outcomes 5, 6, and 7.

4 Course Grading and Expectations

Your grade will be calculated with the following weighting:

Requirement	% of Grade
1. Final Exam	35%
2. Problem Sets	25%
3. Midterm	15%
4. Presentation Project	15%
5. Presentation Discussion Participation	5%
6. Online Reading Quizzes	5%

I will also assign a small portion (up to 5%) at my discretion based on a student's participation in synchronous live sessions.

4.1 Class Structure

With the course entirely online this Spring, the mode of instruction will consist of both synchronous live sessions and asynchronous videos, readings, and class notes

Live Class Sessions on Zoom

Each Tuesday starting at 6:45pm, we will meet for two 45-minute synchronous sessions with a 30 minute break between each. These are required attendance. Assignments (Problem Sets and Reading Quizzes) for that week will be due at 6:00pm on Tuesdays.

To prepare for the live session each week, students are to have completed the reading for that week (also covered on the reading quiz), and have completed the initial viewing of the recordings for that week. The purpose of the live session is to supplement that material and provide additional context and Q&A time for that material.

Students are required to attend these live meetings, join with video and audio, and be prepared to participate actively, which includes responding to and asking questions, as well as working together or in groups on problems. I will record these sessions and make those available for review on ELMS after they are concluded each week.

Live Office Hours on Zoom

I will hold weekly office hours on Zoom (see the top of the syllabus for day and time). Attendance is not mandatory, but I encourage everyone to join them. I will answer questions in these sessions. As with the class sessions, students are expected to be on video during these sessions and be able to talk through audio as well. This is a courtesy to me and the others in the class, and to avoid ghost members joining without being seen. In most cases, I will record those sessions as well and make useful shared material available.

In cases where a student needs to talk in a more confidential manner, such as discussing grades or going over an individual's submitted work. I can schedule meetings by appointment throughout the week or we can have a breakout room to discuss confidential material.

Recorded Lectures

I will provide a series of lectures each week that cover the core material, examples, and other applications I find useful. Typically, the week of material is broken up into 15-minute components to make it easier to watch them as well as reference specific topics again later on.

Watching these videos is required.

Discussions

Student presentations will be provided each Tuesday as a “discussion post” in ELMS. Students will view all presentations and provide comments by Friday of each week. The presenters will provide responses to a subset of the comments by the following Tuesday.

A Typical Week in 641

- Before the Tuesday session: do the initial viewing Recorded Lectures and Readings for the coming week, Complete problem set covering the material from the previous week and the reading quiz on the coming week’s material.
- Tuesday: Reading Quiz and Problem Set due by 6:00pm. Presentations for that week are also due at this time. Live Session meets at 6:45pm.
- Wednesday through Saturday: Work on Problem Set utilizing readings and recordings. View presentations of classmates and join discussion board.
- Sunday: Prof. Finkle’s office hours. Drop in as you want for help on the problem set or other issues.
- Monday: Drop in the TA Camilia’s office hours for help with the problem set or other issues.

In two of the weeks, there will be a midterm. Those weeks will still have problem sets due, but no reading quiz. See the presentation schedule for when your team is to present (Section 4.3).

4.2 Final Exam

The Final Exam will be on the last class day (May 25th). The exam will have a time limit of 150 minutes. The exam will consist of four or five problems similar to those on the Problem Sets and/or quizzes but with some variations. All material covered during the semester is fair game for the final exam. Past exams will be available for study. Students are not permitted to discuss or work together on the Final exam.

4.3 Presentations

The supplemental textbooks (Nicholson and Snyder, Goolsbee et al., and some others) contain a series of “Applications”. These applications are typically one-page descriptions of how the theory in that chapter of the book has been applied by economists in a variety of contexts, including references to the academic research on the topic. Applications provided will cite one or two academic journal articles upon which the Application is based. The Applications also typically suggest a couple interesting questions and/or policy challenges to think about.

Students will work in pairs to give a short presentation at some point during the semester as a recorded video to share with the class. The purpose of the presentation is to have students go

beyond the textbook to examine applications with references from the academic research. While not a research project, presentations are a means of having students read and comment on published academic papers.

I will ask that students to provide their preferences for presentation week during the first week of class, and use that to assign the groups. Presentations will use the textbook application as a starting point to then discuss the cited research paper. This is one example of the difference between graduate and undergraduate education. Our classes are seminars in that students do take an active role in the learning and teaching. I will bear more responsibility for teaching in ECON 641 than any other member of the seminar. But each of you will also bear some responsibility – especially in the presentation.

Presentation recordings will be due by 6:00pm on Tuesday of the corresponding week a group was assigned.

1. No later than Thursday the week before the presentation, the team must email me with their chosen topic from the Applications list provided on ELMS. Presenters should choose an Application that has not been covered (first to email me will get rights to presenting the specific topic), and on a topic from the current or previous two weeks of topics covered in class. The presentation must also discuss the referenced journal article paper from the Application.
2. I will respond to confirm you can go ahead with that Application and associated research paper.
3. Once your selection has been confirmed, you will want to access cited academic paper (library.umd.edu or through a google search; I can assist if needed), and prepare a draft of your slides.
4. Email me your first draft of slides no later than Saturday evening a draft of your slides. I will then provide you with feedback on Sunday.
5. Revise and record your presentation. You can save the recording in AVI, MOV, or MP4 format.
6. When the recording is complete, email me your video file. Because of size limits of email, you may need to use Google Drive or similar to provide the file via a link. I can assist with this as needed. I will then share the video with the class through the Discussion post for that week
7. The other class members will view and respond all presentations posted that week by Friday at midnight. The presenters will then provide responses to a selection of comments or questions chosen by assigned discussants for that presentation.

Note that you are welcome to start the assignment earlier than listed here to best fit your schedule. I can provide feedback earlier if you choose.

This grade will be based on the clarity and quality of the presentation, the presenter's ability to incorporate in my pre-presentation feedback, quality of slides, discussion of the cited research paper, and also the presenter's answers to questions and comments provided in the discussion post.

While this class will be online this semester, these discussions both as the presenters, the audience, and the discussants are critical to helping to bridge the distance learning gap. Your peers are an important part of your learning experience, and so I expect everyone to thoughtfully participate every week.

4.4 Problem Sets

Problem set assignments are provided on ELMS for each week. The homework will always consist of three multi-part analytical problems. Problem sets are all weighted equally and assigned a point score out of 60.

Problem set answers are to be submitted by scanning your written answers and submitting them to ELMS. Typing then on a computer is not recommended if you have never used Latex or Equation editors, and tedious, as there is a lot of math notation used. However, if anyone is interested in learning how mathematical notation is done, many economists use LaTeX¹, a typesetting program. I am happy to provide individuals with material on this. However, it will often take a lot more time to complete assignments and can be a distraction from learning the content.

It is your responsibility to make sure your submission is legible to the TA and myself. Smartphone cameras typically are sufficient for getting a clear photo of the pages. But you are to review the photos and combine them into a single PDF, in numerical order. Submitting multiple images instead of a single file, or submitting blurry or poor photographs that are hard to read will not be considered and subject to late penalties the same as a non-submission.

Typically, two of the questions will relate to material covered during the previous week's synchronous meeting and video lectures, while one of the other problems will relate to material to be covered in videos and readings for the next week. This is intentional. This requires students to study the material on their own prior to live sessions so that we can discuss portions that are more difficult or challenging. Undergraduate courses often claim to expect students to read the material before coming to class. Graduate courses expect students to do more than passively read the material before coming to class.

Sometimes it will be the case that a solution for one of the assigned homework problems is readily available online – even before the homework is due. The TA who grades the homework will also have access to the online solution. Less than full credit will be given when it is obvious that a student's work was mindlessly copied.

Students are encouraged to work with each other on the homework, but each student must turn in his or her own work individually. Those who simply copy answers from others are in violation of the code of academic integrity and is considered a form of cheating. It is also a very poor way of learning the material and will become evident when it comes to quizzes and the exam.

4.5 Math Assessment Quiz

In the third week of class, there will be a calculus assessment quiz to help identify students in need of additional review. Those who are identified as needing extra help will be contacted and additional math review sessions will occur. Students are not permitted to discuss or work together on the Math quiz.

4.6 Midterm Quiz

There will be one midterm on **4/13**. The midterm will consist of two problems similar to the problem sets. The material for the quiz can be from anything covered prior to that class. The quiz will take 45 minutes. Students are not permitted to discuss or work together on the Midterm.

¹https://userpages.umbc.edu/~cheyneh/pdfs/gsr_d_handout.pdf

4.7 Reading Quizzes

Before the start of most classes, a reading quiz will be assigned consisting of 8 to 10 multiple choice questions covering the reading for that week. The quiz can be done at any point during the week, but is to be completed no later than 6:00pm on class days. There is no quiz before final exam class. Students are not permitted to discuss or work together on the reading quizzes.

4.8 Attendance and Class Participation

I expect everyone to attend live sessions weekly. This class moves quickly and it is quite easy to fall behind even from missing a single session. My teaching style relies on the feedback of students. I encourage you to utilize our class time to make clear to me what topics are worthy of particular emphasis and which items can be moved on more quickly.

To ensure an effective learning environment for the whole class, refrain from texting and non-class related computer use (checking email, etc) while in the session.

4.9 Grading Scale

At the end of the semester I will calculate the weighted average of each graded component of the course outlined above. I will look at the distribution of total course points across students and assign letter grades in a way that respects the ordering of numerical course grades. I will decide where to draw the lines between different letter grades according to my professional judgement.

While individual assignments will not have a letter grade, as the course makes progress, I will convey to the class how grade distributions stand up to any one date and what letter grades might be expected based on that distribution should the class have ended at that time with no commitment to that times numerical-to-letter-grade conversion holding at the end of the class (numerical score distributions may fluctuate substantially, which means that numerical-to-letter-grade conversions will vary as well depending on any one time's numerical score distribution).

5 Other Standard Policies for the Program and the University of Maryland

5.1 Workload

Mastering the material covered in this course requires a significant amount of work outside of class. Students should expect to spend more time outside of class than in class or viewing lectures— typically at least twice as much time. The courses in our DC program are 12-week courses that cover all the same material as a traditional semester-long 3-credit course (15 weeks). The compressed schedule makes it possible to complete our degree in just 15 months if you take 2 courses each term. But the compressed schedule also implies an accelerated pace with an average of 25% more work per week in a given course ($15/12 = 1.25$). The normal full-time load in a master's program is 3 courses per semester, or 6 courses per year. The weekly work load when taking 2 of our DC courses per term is equivalent to the load from 2.5 "normal" 15-week courses - so $2.5/3.0=83\%$ of a full-time load. Students who take 2 courses per quarter in our program complete 8 courses per year. So over the course of a year, taking 2 courses per quarter in our DC program is equivalent to 133% of a full-time load ($8/6 = 1.33$).

5.2 Academic Integrity

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit <http://www.studentconduct.umd.edu>.

All Reading Quizzes, the Midterm and Math Quiz, and the Final Exam must be done without consulting or working with others in the class. While I encourage you to prepare and study with others for the exams, you are not permitted to work with others on the exams or discuss with others before the exam is completed.

5.3 Student Conduct

Students are expected to treat each other with respect. Disruptive behavior of any kind will not be tolerated. Students who are unable to show civility to one another or myself will be referred to the Office of Student Conduct. You are expected to adhere to the Code of Student Conduct.

5.4 Excused Absences

The University of Maryland's policy on excused absences is posted here: <http://www.president.umd.edu/administration/policies/section-v-student-affairs/v-100g>

Please note: If you miss any class meetings for any reason, you are still responsible for all material covered during the meeting you missed. It is your responsibility – not the instructor's – to get yourself caught up in the course. Instructors routinely facilitate things by posting lecture notes, etc.

If you need to miss an exam or other graded course requirement because of illness, injury, or some other emergency: Follow doctor's orders and get documentation. Get in touch with the instructor as soon as you're able – preferably prior to missing the exam or deadline. Communicate with the instructor to make up the course requirement as soon as possible. You are entitled to recover before you make up the course requirement, but you are not entitled to extra days to study beyond the time the doctor's note says you're incapacitated. If you are incapacitated for more than a week or so beyond the end of the term, your grade in the course will be an "Incomplete". In such cases you must negotiate a plan with your instructor for completing the course requirements. Once you make up the course requirement the instructor will change your "I" to the appropriate letter grade.

5.5 School Closings and Delays

Information regarding official University closing and delays can be found on the campus website and the snow phone line: (301) 405-SNOW (405-7669) The program director will also announce cancellation information to the program as an announcement on the program's ELMS/Canvas site. This will generally be done by 1:00 p.m. on days when weather or other factors are an issue. If classes need to be cancelled during the semester, it may be necessary to move the final exam back a week so missed classes can be made up.

5.6 UMD Counseling Center

Sometimes students experience academic, personal and/or emotional distress. The UMD Counseling Center in Shoemaker Hall provides comprehensive support services that promote personal, social, and academic success. The cost of these services is covered by the fees you already paid when you registered for classes, and there is no additional charge if you use the services. Proactively explore the range of services available, including the Counseling Service, Accessibility and Disability Service, Learning Assistance Service, and the Testing Office, all described at <http://www.counseling.umd.edu/>

5.7 Students with Disabilities

The University of Maryland does not discriminate based on differences in age, race, ethnicity, sex, religion, disability, sexual orientation, class, political affiliation, or national origin. Reasonable accommodations will be arranged for students with documented disabilities. Students who have an accommodations letter from the Accessibility and Disability Service (ADS) should meet with me during the first week of the term to discuss and plan for the implementation of your accommodations. If you require reasonable accommodations but have not yet registered with ADS, please contact the Accessibility and Disability Service at 301-314-7682 or adsfrontdesk@umd.edu.

5.8 Academic Progress

The UMD Graduate School requires that students maintain a GPA of at least 3.0. Students whose cumulative GPA falls below 3.0 will be placed on academic probation by the graduate school. Students on academic probation must ask the program's director to petition the graduate school if they want to remain enrolled in the program. The petition must include a plan for getting the student's GPA up to at least 3.0. Students who do not live up to their plan can have their enrollment in the program terminated without having earned the degree. Note: a grade of "B" corresponds to a GPA of 3.0. A grade of "B-" corresponds to a GPA of 2.7.

6 Schedule of Topics

Updates will be made on ELMS as needed and is subject to revision. PS=Problem Set, RQ=Reading Quiz.

Meeting	Date	Section Topics	Readings (Perloff Chapter)	Assignment	Other
1	3/2	Competitive Market Model (Supply and Demand)	2	RQ1	
2	3/9	Utility and Optimal Choice;	3	PS1, RQ2	
-	3/16	Spring Break (No live session)		PS2	
3	3/23	Lagrangian Method, Derivation of Demand	4	RQ3	Math Quiz
4	3/30	Consumer Welfare	5	PS3, RQ4	
5	4/6	Uncertainty; Labor Supply	16	PS4, RQ5	
6	4/13	Production and Profits	6, 15	PS5	Midterm Quiz
7	4/20	Cost Minimization and Competitive Supply	7, 8	PS6, RQ6	
8	4/27	Perfect Competition Applications	9	PS7, RQ7	
9	5/4	Monopoly and Pricing	11, 12	PS8, RQ8	
10	5/11	Imperfect Competition and Game Theory	13, 14	PS9, RQ9	
11	5/18	Externalities and Commons	17	PS10, RQ10	
12	5/25	Final Exam			Final Exam