ECON641: Microeconomic Analysis

Master of Science Program in Applied Economics

University of Maryland College Park

Spring 2025

Important: In addition to referencing the course calendar, you must regularly check the class homepage and Announcements for updates and supplementary material.

Contact and Meeting Information

Class Meeting and Times:

Synchronous Class Meetings: Tuesdays 6:45pm – 9:30pm (with break) via Zoom. See the Zoom tab to the left on ELMS.

To join the Zoom meetings, you must log into Zoom using your UMD credentials. When logging in to Zoom, select "SSO" (image of a key) and enter "UMD" in the domain. More details here.

*The **final exam** for this course will be proctored and held **in person**. The date is tentatively set on Saturday 5/17, but the details will be decided during the first week of class. This is NOT on Zoom and you are required to attend in person.*

Instructor:

Dr. Aaron Finkle (He/Him)

afinkle@umd.edu

Office Hour (via Zoom): Tuesdays 5:30p. I am also able to schedule other times by appointment. Use the same Zoom link as used for the live classes (in Zoom tab)

Graduate TA

The Graduate Teaching Assistant holds weekly office hours. You can drop in on these (no appointment needed)

Yidan Xu

yidanxu@umd.edu

Office Hour: TBD

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.

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. The University creates an "@umd.edu" email address for every graduate student. All official UMD communications will be sent to students at their "@umd.edu" email address. You are responsible for reading your @umd.edu email address, including ELMS/Canvas Announcements I send to the class. You should make sure ELMS/Canvas Announcements and messages are forwarded to an email address that you check regularly. Failure to check email, errors in forwarding email, and returned email due to "mailbox full" or "user unknown" will not excuse a student from missing announcements or deadlines. I will do my best to respond to email within 36 hours.

Course 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.

Course Objectives

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.
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.

Required Textbook and Supplementary Materials

The required text for this course is:

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

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.
A 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

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 the course page on ELMS.

Course Grading

Your grade will be calculated with the following weighting:

Requirement	**% of Grade**
In-Person Final Exam	35%
Problem Sets	25%
Midterm	15%
Presentation	5%
Early Math Assessment Quiz	10%

Presentation Discussion Participation	5%
Reading Quizzes	5%

Final Exam

The Final Exam will be held in person on the scheduled last class day. Students are required to attend the final exam in person (not on Zoom). The exam will be designed to take students about 2 hours to complete, but students will have the entirety of the class time to complete the exam. The exam will consist of around five multi-part problems similar to those on the Problem Sets but with some variations. All material covered during the semester is fair game for the final exam. The final exam is closed book, though students are permitted to use a scientific, non-programable calculator. The final exam will be graded as a percentage.

Presentation

Students will give a short 8 to 10 minute presentation at some point during the semester either live or a pre-recorded presentation. I will ask that students to provide their preferences for presentation week during the first week of class. I will then make a schedule of presentations and assign whether the presentation will be online or in class. Presentations will use the textbook applications as a starting point to then discuss the cited research paper.

Details on the assignment can be found on the Presentation Overview page:

Presentation Assignment Overview

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, inclusion of outside material, and also the presenter's answers to questions posed during the presentation. A more detailed explanation of the grading rubric, requirements, and sample material will be posted to ELMS.

Presentation Discussion

For live presentations, a short discussion will follow with the audience (students) asking questions or commenting on the presentation. For pre-recorded presentations, there will be a discussion post where every student is to provide a thoughtful written response.

Problem Sets (weekly)

Problem set assignments are provided on ELMS for each week. The homework will always consist of 2 or 3 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 as there is a lot of math notation. However, if anyone is interested in learning how mathematical notation is done, many economists use LaTeX, 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.
Typically, one of the problems will relate to material covered during our previous meeting, while one of the other problems will relate to material to be covered on the day that the homework problem is due. This is intentional. This requires students to study the material on their own prior to my lecture. 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 strongly 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.

Math Assessment Quiz

Microeconomic theory relies heavily on a solid understanding of differential calculus and solving optimization problems. It is critical that students are able to solve these problems in order to progress through the class. In a scheduled class meeting over Zoom (see schedule for dates at the bottom of syllabus), there will be a calculus and optimization quiz to help identify students who need to spend more time reviewing these topics. The math quiz will take 45 minutes during the start of class. This will be a closed-book, closed-note quiz.
Solutions to the math quiz will be posted immediately after the quiz is taken. The grades will be available before the next class session. Students who do not perform adequately on the Math quiz will need to attend the TA's regularly scheduled office hours that next session, which will be devoted to working on the material from the quiz. Those students will be provided with the answer key to the quiz immediately after the class quiz, and are expected to review those answers in preparation for the TA's office session.
This math assessment quiz is critical to identifying those who are not keeping up with the mathematical tools used in Microeconomics. It is scheduled early in the term specifically to allow for a chance to “right the ship” and get back on track with the material. The relatively low grade weight of the quiz is to allow for this not to throw off the semester grade and provide ample opportunity to those who are dedicated to the class to improve.

Midterm Quiz

There will be one midterm (see schedule below) later in the semester held on Zoom during the first half of the class session it is scheduled. The midterm will consist of two or three problems similar to the problem sets. The material for the quiz can be from anything covered prior to that class. The quiz will take 50 minutes. This will be a closed-book, closed-note quiz.

Midterm Quizzes

Each week other than the final week, there will be a brief 8 to 10 question reading quiz with multiple choice/fill in the blank/numerical problems on the readings for the coming class. These are intended to be relatively simple, but push students to make sure to have the reading done, and began

to work on some of the problem solving for that chapter. They are a low stakes way of gauging your understanding of the reading and help pinpoint areas of confusion. These are due by 6pm Tuesdays (in preparation for the live session class).

Attendance and Participation in Live Sessions

Attendance is not graded, but expected for all synchronous live meetings. If an emergency occurs where you need to miss a live session, you are responsible for catching up on any material from that missed classes. 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. Your alertness and participation in class will earn you a small bump to your final grade.
To ensure an effective learning environment for the whole class, refrain from texting and non-class related computer use (checking email, etc).

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).

Weekly Schedule

Live session date in (parentheses)

Week 1: Supply and Demand (3/4)

Week 2: Consumer Choice (3/11)

Week 3: Lagrangians and Constrained Optimization (3/18)

Week 4: Consumer Welfare (3/25)

Week 5: Risk and Expected Utility Theory (4/1, Math Quiz in live session)

Week 6: Production (4/8)

Week 7: Costs and Perfect Competition (4/15)

Week 8: Market Welfare Analysis (4/22)

Week 9: Externalities (4/29, Midterm quiz during live session)

Week 10: Monopoly (5/6)

Week 11: Game Theory and Oligopoly (5/13)

Week 12: Final Exam (5/20 - in person meeting)

Other Standard Policies for the Program and University of Maryland

Policies related to all graduate courses at the University of Maryland are posted on this page of the Graduate School's website:

https://gradschool.umd.edu/faculty-and-staff/course-related-policies

Please familiarize yourself with these policies related to academic integrity, non-discrimination policy, accessibility, absences and accommodations, grading, academic standing, grievance procedures, and other important policies.

Contact Hours

Three credit master's-level courses at the University of Maryland require a minimum amount of contact between instructors and students. Our courses' 12 weekly meetings only satisfy 80% of the university's contact requirement. The other 20% is satisfied by weekly mandatory and graded online contact. In principle, the contact hours requirement could be satisfied by scheduling 3 additional 150-minute meetings per term, or 6 additional 75-minute meetings, or 10 additional 45-minute meetings. But in practice the contact hours requirement is satisfied by the weekly online discussion boards. The weekly online discussions are a more flexible way to ensure that our program's courses in DC provide the same level of student-instructor contact as the traditional 15-week face-to-face version of the same course when it is taught on campus in College Park.

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 – typically at least twice as much time.

In a regular 15-week semester (as in the College Park version of our program): Taking 3 master's-level courses is supposed to approach the time commitment of a full-time job (~36-39 hours per week, so 12-13 hours per week per course). Taking 3 master's-level courses while simultaneously working at a demanding full-time job during the day is not advisable. Students with questions about the workload in this program should speak with one of the program directors.

The courses in our DC and online programs 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). So expect about 15 hours of work per week per course. The weekly workload when taking 2 of our DC courses per term is equivalent to the weekly load from 2.5 "normal" 15-week courses - so maybe about 30 hours per week. Students who take 2

courses per quarter in our DC 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).

Academic Progress

The 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 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 be forced to leave the program 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.

Excused Absences

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 to work with study partners, the teaching assistant, and the instructor to make sure you catch up on the missed material. 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've been 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.

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. When classes need to be canceled during the semester, we make every effort to schedule makeup classes.

UMD Counseling Center

Sometimes students experience academic, personal and/or emotional distress. The UMD Counseling Center in Shoemaker Hall provides comprehensive and confidential 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 at http://www.counseling.umd.edu/

UMD Accessibility & Disability Service

The University of Maryland is committed to creating and maintaining a welcoming and inclusive educational, working, and living environment for people of all abilities. The University of Maryland is also committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of the University, or be subjected to discrimination. The Accessibility & Disability Service (ADS) provides reasonable accommodations to qualified individuals to provide equal access to services, programs and activities. ADS cannot assist retroactively, so it is generally best to request accommodations several weeks before the semester begins or as soon as a disability becomes known. Any student who needs accommodations should contact ADS as soon as possible so that they have sufficient time to make arrangements. For assistance in obtaining an accommodation, contact Accessibility and Disability Service at 301-314-7682, or email them at adsfrontdesk@umd.edu. Information about sharing

your accommodation letter, discussing accommodation logistics and getting assistance from ADS staff and more can be found on the ADS website.

Graduate Academic Counselor: The UMD Graduate School also has an academic counselor available to support students who are having difficulty navigating mental health resources on campus, are considering a leave of absence and/or need assistance finding mental health care off campus. The Graduate Academic Counselor also facilitates bi-weekly Graduate Student Circle Sessions which provide an opportunity to learn about resources and connect with other graduate students. Students can learn more about the Graduate Academic Counselor by going to: https://gradschool.umd.edu/gradcounselor

Course Evaluations: Near the end of the term, you will receive an email inviting you to submit a voluntary and anonymous course evaluation. Your feedback on courses will be very helpful in improving the quality of instruction in our program.

Building Access (DC Campus): There is a smartphone app that can be used to enter our building in DC after normal business hours. Students in our online program will need this to take their in-person final exams in ECON 641. The program coordinator will provide information about this. We will also provide information about the code for entering the front door of our suite. Please make sure you are receiving the ELMS-Announcements that we send out to the program about these and other important matters.