

Master of Professional Studies in Applied Economics
University of Maryland
1400 16th Street, NW, Suite 140, Washington, DC
ECON 641: Microeconomic Analysis
Spring 2016

Syllabus – Revised [2016-03-01](#)

Instructor: John Straub, (301) 405-3531 (Straub@econ.umd.edu)

Office Hours: 30 minutes before class every Tuesday evening, and by appointment.

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Office Hours: See Program's ELMS/Canvas site, with weekly reminders via ELMS/Canvas announcement

Prerequisites:

Admission to the Master of Professional Studies in Applied Economics program.

Note: This requires at least 1 semester of calculus with a grade of at least B-.

Class meets: Tuesday evenings, 6:45-9:30 p.m.

There will always be a 15-minute break at some point between 7:45 and 8:30.

General Description and Overview

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 practical examples 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.

Work Load

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.

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. Students who take 2 courses per quarter in our program complete 8 courses per year. So taking 2 courses per quarter in our program is equivalent to 133% of a full-time load ($8/6 = 1.33$).

Students who take 2 courses per term in our DC program should expect to do 25-33% more work per week than a student in a full-time master's degree program.

In a nutshell: This course is demanding. There should not be very many days, if any, between now and May 17th that you do not spend some quality time studying for this course.

Bottom line: If you work hard and concentrate on ECON 641 over the next 12 weeks, you will learn a lot of microeconomics. And you will develop the skills a professional economist needs to apply microeconomic theory in a wide variety of interesting and important contexts.

Required Textbook:

Intermediate Microeconomics and Its Application by Walter Nicholson and Christopher Snyder, 12th ed.

Personally, I will be working from the 12th edition. I will work with students who have the 11th edition to resolve any discrepancies that matter for the purposes of our course. Students who have older editions than the 11th edition must assume responsibility for resolving such discrepancies on their own.

Recommended CourseMate: Used copies of textbooks can be obtained for a fraction of the price of new copies. However, there are additional online resources that you can access if you purchase a "bundled" version of the textbook. The "bundled" version comes with a special access code to online resources that you would not have if you bought a used copy of the book.

The bundled version of the book comes with what is called CourseMate. CourseMate has many features, but the one that is especially valuable to students is the online video solutions for 2 of the problems from the back of each chapter in the book. These video solutions are narrated by the textbook authors. They do not just show you the answer to the problem, but also demonstrate how to solve the problem, and what you should be thinking as you work through the problem. This is exactly the kind of help that students find most useful. This kind of help would normally take place during office hours with an instructor or a TA, but students in our program often find it difficult to meet outside of class time. These video solutions provide a very convenient way to get the most valuable kind of support on your own schedule.

A deal has been negotiated with the textbook publisher. You can purchase a brand new hardcover copy of the textbook, bundled with an access code for CourseMate. The cost if you purchase the bundle is \$270. This is about \$200 more than you would spend for a used copy of the book without access to CourseMate. My experience suggests that the extra \$200 is well worth the expense for students who are serious about learning how to apply microeconomic analysis, but would otherwise struggle to master the material. ECON 641 will go very fast. There will not be a lot of time for remedial work during our weekly meetings, so many students may need extra help. A tutor would cost much more than \$200 over the course of the next 3 months. These textbook-author-narrated video solutions to selected problems are a very cost-effective way to get extra support in ECON 641.

The choice is yours. No one is required to purchase the bundled version of the book. But if you would like to buy the bundled version, you can do so via this link:

<http://www.cengagebrain.com/course/site.html?id=1-22GDF6H>

An additional paternalistic note: Over the years I have encountered many students who are penny wise and pound foolish when it comes to textbooks. This is exactly the kind of pitfall that an economist should not fall into! Even in this master's degree program, I encounter a couple students in every cohort who think it's a good idea to save money by not purchasing the textbooks for their courses. As far as I can tell, this is definitely NOT a good idea if you are serious about mastering the material. If you are the kind of person who will have a master's degree in economics, you should also be the kind of person who has economics and econometrics textbooks on their shelf for reference.

Three other useful texts

The following books are not required, but I will rely on them for some material. I will occasionally post excerpts on the course's ELMS/Canvas website as necessary for your reference.

1. *Microeconomic Theory: Basic Principles and Extensions* by Walter Nicholson and Christopher Snyder, 11th edition.

I refer to this book as BP&E below (Basic Principles and Extensions).

Note that this book and our required textbook have the same authors. This non-required text (BP&E) presents the same material, but it uses much more calculus and higher level mathematics. The course's required text (*Intermediate Microeconomics and Its Application*) avoids calculus entirely, but includes numerous (more than 100) concise examples of how microeconomic theory can be applied to address real-world policy-relevant questions. We will make extensive use of these applications in the course, which provide a great introduction to what our entire program is all about: Applied Economics.

The more advanced BP&E book uses some mathematical tools that go beyond the scope of our program. But since the required textbook avoids calculus entirely, it presents the material at a level of mathematical rigor that is below the standards of our program. My strategy is to use the required text as your main reference for understanding microeconomic theory as it's applied by professional economists. I will supplement the required text with my own notes and with selected excerpts from BP&E in order to bring the level of mathematical rigor up to the standards of our program. I will provide PDFs of all the required excerpts from BP&E. Even though you will only be responsible for these selected excerpts, many students will find it worthwhile to purchase both books and keep them for future reference.

2. *Mathematical Methods for Economics* by Michael W. Klein, 2nd edition (2002)
3. *Fundamental Methods of Mathematical Economics* by Alpha Chiang, 4th edition (2006)

Both of these books are math books, but the topics are organized and presented with economic applications in mind. This is fundamentally different from the advanced Nicholson and Snyder text (BP&E), which is an economics book that happens to use a lot of math. The book by Michael Klein is slightly more modern than the book by Alpha Chiang. (The first edition of Chiang's book came out in 1967. The first edition of Klein's book came out in 1997.) They are very helpful resources for economics students looking for help with the mathematical tools that are most useful to economists. Most students find it very helpful to read about the same topics in more than one book.

A useful online resource: <https://www.khanacademy.org/math>

The site includes a full tutorials on [Differential Calculus](#):

<https://www.khanacademy.org/math/differential-calculus>

And a derivatives application "skill check" on [Optimization](#):

<https://www.khanacademy.org/math/differential-calculus/derivative-applications>

Course 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. Students are responsible for updating their current email address via <http://www.testudo.umd.edu/apps/saddr/> AND for paying attention to messages I send to the class. 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. Please include ECON641 in the subject line, so I can easily distinguish your message from spam or other less important matters.

Schedule (revisions, if any, will be announced in class, by email, and posted in a revised syllabus online)

The class will meet on 12 consecutive Tuesday nights from March 1st – May 17th.
There will be a 15-minute break every week at some point between 7:45 and 8:30.

I. Introduction

3/1: Meet each other and introduce the course

Ch. 1: Economic Models

First example of a textbook “Application” presentation (example presentation by the instructor)

Note the UMD Research Port: <https://researchport.umd.edu/>

Explain system for scheduling student presentations (details posted on ELMS/Canvas)

II. Demand

Ch. 2: Utility and Choice

3/8: Applications of Utility and Choice (2 student presentations:)

Optional Reading: Review of the rules of differentiation (Chiang, Ch. 7)

Indirect utility function and expenditure function (BP&E Ch. 4)

3/15: Another application of Utility and Choice (1 student presentation:)

Indirect utility function and expenditure function, cont. (BP&E Ch. 4)

Ch. 3: Demand Curves

Applications of Demand Curves (1 student presentation:)

Saturday 3/19: 11:00-1:00: Practice Exam (optional)

1:15-2:45: Review Session (optional)

III. Uncertainty and Strategy

3/22: Ch. 4: Uncertainty

Applications of Uncertainty (student presentations:)

Ch. 5: Game Theory

3/29: Ch. 5: Game Theory (cont.)

Applications of Game Theory (student presentations:)

IV. Production, Costs, and Supply

4/5: Ch. 6: Production

Ch. 7: Costs

Applications related to Production and Costs

(student presentations:)

4/12: Lagrange multiplier method for constrained optimization (BP&E Ch. 2)

Optional reading: Lagrange multiplier method (Chiang sections 12.1-12.2)

Application of Lagrange multiplier method to the cost minimization problem (BP&E, Ch. 10)

Shephard’s Lemma and Conditional Factor Demands (BP&E, Ch. 10)

Ch. 8: Profit Maximization and Supply

Applications related to Profit Maximization and Supply

(student presentations:)

V. Perfect Competition

4/19: Ch. 9: Perfect Competition in a Single Market
Ch. 10: General Equilibrium and Welfare (Rosen, Ch. 3)
Applications related to Perfect Competition
(student presentations:)

Saturday 4/23 11:00-1:00: Practice Exam (optional)
1:15-2:45: Review Session (optional)

4/26: **Quiz** (6:45-7:45)

VI. Market Power

Ch. 11: Monopoly
Applications related to Monopoly
(student presentations:)

5/3: Ch. 12: Imperfect Competition
Applications related to Imperfect Competition
(student presentations:)

VIII. Two Other Kinds of Market Failure

5/10: Ch. 16: Externalities and Public Goods
(student presentations:)

Extra Credit: Ch. 13: Pricing in Input Markets (Labor Supply)
Ch. 14: Capital and Time
Ch. 15: Asymmetric Information
Ch. 17: Behavioral Economics

Extra credit question posted after class on 5/10.

Answers to extra credit problem due with the final exam on 5/17

Note: Extra credit will only be given if class' course evaluation response rate is above 80%.

Saturday 5/14: 11:00-1:00: Practice Exam (optional)
1:15-2:45: Review Session (optional)

5/17: **Final Exam**

Practice Exams and Review Sessions

The practice exams on 3/19, 4/23 and 5/14 are optional. On those days, I will come to our suite on 16th Street and hand out a practice exam that has a format very similar to the real exam I will give on 5/17. The problems on each practice exam will be restricted to the portion of the course's material covered since the previous practice exam. Students are encouraged to "take" the practice exam from 11:00-1:00 in one of our classrooms under "exam conditions".

After each practice exam, from 1:15-2:45, I will present a solution to each question on the practice exam. Time permitting, I will also field questions not directly related to the practice exam.

I will post each practice exam and its solution on ELMS after the fact, so they will also be available to study for students who do not attend the practice exams and review sessions.

Graded Course Components

There are 4 graded components to the course. The 4 components and their relative weights in the course grade are: in-class “application” presentations (20%), homework (40%), quiz (10%) and the final exam (30%).

In-class “Application” Presentations

The required textbook presents more than 100 concise “Applications” of microeconomic theory. These applications are typically one-page descriptions of how the theory in that section of the book has been applied by economists in a variety of contexts. The Applications presented in the book typically cite one or two academic journal articles upon which the applied work is based. The Applications also typically suggest a couple interesting questions and/or policy challenges to think about.

We will use the textbook Applications as the starting points for student presentations that look a bit further into the issues they raise. The course schedule calls for 20 student presentations – 2 per week for 10 weeks. Each student will give a presentation at some point during the semester. If fewer than 20 students enroll in the course, we will simply have fewer student presentations. If more than 20 student enroll in the course, some students will need to present to me privately outside of class. Each presentation will be about 10 minutes long, as described below.

I will ask that students choose their presentation topic and date after the 1st class. This requires that students look ahead to the textbook Applications that will come throughout the whole semester.

Some of the presentations early in the semester will come the week after the relevant material has been covered in class. Most of the presentations, however, will come on the same day that the relevant material is being covered in class. This means that the student presenters must read ahead and prepare their presentations before sitting through my lecture on the relevant material. This is one example of the difference between graduate and undergraduate education. Our classes are seminars. That means that all members of the group share responsibility for teaching each other. 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 on the day you present your Application.

Homework

Students will turn in homework at the beginning of each class (except for the first class on 3/1 and the final class on 5/17). The homework will always consist of 2 or 3 analytical problems. 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. This is also intentional. I’m sure you will learn a lot from studying the solution for a challenging problem. You must still write out your own version of the solution and turn it in. The person 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. Students who have obviously copied from each other will receive grades of zero for the problems in question.

Quiz

The first hour of class on 4/26 will be devoted to an in-class quiz. The quiz will consist of 2 problems that are similar, but slightly more interesting, than the HW problems. Anything covered up to that point in the course is fair game for the quiz (II. Demand, III. Uncertainty and Strategy, IV. Production, Costs and Supply, V. Perfect Competition). The quiz will be closed book. Calculators are permitted, but no notes or other study aids of any kind will be permitted.

Final Exam

The final exam will consist of analytical problems that are similar, but more interesting than the homework problems. Anything covered at any point in the course is fair game for the final exam. In the end the exam will consist of 2 or 3 problems that happen to be focused on specific aspects of the course,

but I will not announce ahead of time which aspects of the course the problems will relate to. Students are responsible for everything covered over the course of the entire term.

I will design an exam that I think should take 2 hours to complete, but students are welcome to use the entire class period from 6:45-9:30 if they like. The exam is closed-book. Calculators are permitted, but no notes or other study aides of any kind will be permitted.

Extra Credit and Additional Details Related to Grades

Extra Credit and 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. As an extra incentive for you to evaluate the course, I will offer an extra credit opportunity to the whole class if the course evaluation response rate exceeds 80%. I will not be able to see which students have evaluated the course, but I will be able to see the overall response rate.

If the response rate exceeds 80%, I will offer an extra credit opportunity worth up to 3 course points (~3% of your overall course grade). Partial credit is possible (e.g. 2.5 out of the 3 possible points).

Assuming the response rate exceeds 80%, I will post the extra credit question after class on Tuesday 5/10. To receive the extra credit, students must submit their answer along with their final exam on 5/17. Students are expected to work out their own answers to the question individually. Students who have clearly copied from each other will receive no extra credit.

Grades Related to the In-class "Application" Presentations and Online Discussions

Complete drafts of PowerPoint presentations are due as email attachments by 7:00 p.m. on the Sunday before your presentation. Please send them to straub@econ.umd.edu. I will send feedback by 5:00 p.m. on Monday. You need to revise your presentation based on my feedback and send the final version to me as an email attachment by 6:00 p.m. on the day of the presentation.

Student presenters should have a well-prepared presentation that lasts about 7 minutes. During these 7 minutes, the other students and I will only interrupt for brief clarifying questions. At the end of the 7-minute presentation, I will ask each student to write a well-formulated single-sentence question for the presenter on an index card. I will give the class about 1 minute for this task. As I collect the cards, I will ask the presenter one question of my own choosing. The presenter will have a minute or two to respond to my question. I will grade the presenter and the audience as follows:

Presentations will be graded according to the criteria specified in a grading rubric posted on the course's ELMS/Canvas site. The presenter will get 0-10 points for the quality of the initial presentation, and 0-3 points for the quality of his or her response to my question. Each student in the audience will get something between 0 and 2 points for the question on their index card. Students who have asked interesting and well-formulated questions will get 2 points. Students who ask a less interesting and/or less well formulated question will get fewer than 2 points (1 or 1.5 points, perhaps). Students who are not present for the presentation will get zero points.

After each class I will post at least one question to a discussion board on the course's ELMS/Canvas site. The question(s) will be related to that evening's presentations. Everyone in the class – including the presenter – can discuss the posted question until midnight the following evening. Every student in the class will get something between 0 and 5 points based on my assessment of their contribution to the online discussion. (Grading rubric will be posted on the class' ELMS/Canvas site.) People who do not contribute anything of merit will get zeros. People who make insightful and constructive contributions will get 5's. (People who make inappropriate contributions in the online discussion forums will have to have an in-person discussion with me.)

At the end of the semester, I will average each student's scores for the index card questions (something between 0 and 2) and the online discussions (something between 0 and 5). I will add these to each student's presentation grade (something between 0 and 10) and the grade they got for their response to my post-presentation question (something between 0 and 3). So there are 20 possible course points related to the in-class student presentations. Before calculating the average scores, I will throw out each student's 3 lowest index card scores, and 2 lowest online discussion scores.

Homework Grades

Each homework problem will be worth some number of “raw points”. I will calculate the proportion of raw points that you earned on each problem. Homework problems that are not turned in on time receive a grade of 0. At the end of the semester, I will average your homework problem grades, giving each problem equal weight. I will multiply your average homework problem grade by 40. So there are 40 possible course points related to the homework problems. Before calculating the average HW grades, I will throw out each student’s 3 lowest HW problem scores.

Exam Grades

Each exam question will be worth some number of “raw points”. I will calculate the proportion of all the raw points that you earned on the exam and multiply that number by 30. So there are 30 possible course points related to the exam.

Final Course Grades

At the end of the semester I will simply add up each student’s course points. This will be a number between 0 and 100 (or 103 if there’s an extra credit opportunity). I do not grade on a curve. Numerical course grades will be translated into letter grades as follows:

93-103	A
90-92	A-
80-89	B+
70-79	B
60-69	B-
50-59	C+
40-49	C
30-39	C-
20-29	D+
10-19	D
0-9	F

I might give an A+ to a student or two at the very top of the class’ grade distribution.

Other Standard Policies for the Program and the University of Maryland

Contact Hours: Three credit courses at the University of Maryland require a minimum amount of contact between instructors and students. Our courses' 12 weekly 3-hour meetings only satisfy 80% of the university's contact requirement. The other 20% is usually satisfied by mandatory and graded online contact. Instructors have some discretion in how they structure the online component of their course. In principle, the contact hours requirement could also be satisfied by scheduling 6 additional 75-minute meetings per term, or one additional 45-minute meeting per week. The online components of our courses are a more flexible way to ensure that our program's courses provide the same level of student-instructor contact as a traditional 15-week, face-to-face, 3-credit course at the University of Maryland.

Academic Integrity: The University of Maryland has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards applicable to all undergraduate and graduate students, and you are responsible for upholding these standards as you complete assignments and take exams in this course. Please make yourself aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information see www.studenthonorcouncil.umd.edu.

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.

Medical Excuses: 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.

If you need to miss an exam or other course deadline 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". 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). Since our program is an evening program in downtown Washington, DC, rather than a day program in College Park, we do not always cancel classes on the same days as the College Park campus. The program director will always announce cancellation information to the program as an announcement on the program's ELMS/Canvas site.

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, and national origin. Reasonable accommodations will be made to students with documented disabilities. I will make every effort to accommodate students who are registered with the Disability Support Services (DSS) Office and who provide me with a University of Maryland DSS Accommodation form.

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.

Building Access: The door to the building at 1400 16th Street is unlocked on weekdays until 7:00 p.m. Students who arrive after 7:00 will find the door locked. The building's security guard is stationed at a desk just inside the door until 11:00 p.m. and will let you in. You can also call the phone on the security guard's desk by dialing (202) 328-5158. If the security guard happens to be away from his or her desk when you arrive, you can pick up the black phone to the right of the door at 1400 16th Street. You will be connected to the company that handles security for our building. If you tell them you are with the University of Maryland, they should ask you for a password. The password is "Drawbridge". When you tell them the password, they will be able to unlock the door for you.