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## EC301 Intermediate Microeconomics Syllabus

Last Updated on January 7, 2020

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**Instructor.** My name is Hanzhe Zhang. My office hours are Tuesdays 4-5pm in Brody Hall 112, or by appointment. Lectures are Tuesdays and Thursdays 1:00pm-2:20pm and 2:40pm-4:00pm in Brody Hall 112. For any questions not found on the syllabus, please email me: [hanzhe@msu.edu](mailto:hanzhe@msu.edu) or the head TA, Zijian Qi, [qizijian@msu.edu](mailto:qizijian@msu.edu).

**Teaching Assistants.** The teaching assistants will grade the problem sets and exams, and answer questions related to the problem sets and exams during help room hours. All the teaching assistants use the EC301 Help Room as their office hours. Please visit the help room whenever it is convenient for you for general economic questions or help working on economic problems, as well as procedural questions (e.g., clarifying grading policy, etc.). Hours are listed below.

### TA's Office Hours and Help Room

**Location: 3rd Floor West Wing in Main Library**

	3-6pm	6-9pm	Starting	Ending
Monday	Ahn Do, <a href="mailto:doanh@msu.edu">doanh@msu.edu</a>	Zijian Qi <a href="mailto:qizijian@msu.edu">qizijian@msu.edu</a>	1/13	4/20
Tuesday	Yiqian Wang, <a href="mailto:wangy160@msu.edu">wangy160@msu.edu</a>	Sibbir Ahmad	1/13	4/20
Wednesday	Kit Zhou, <a href="mailto:zhoukath@msu.edu">zhoukath@msu.edu</a> Samuel Tucker, <a href="mailto:tucke130@msu.edu">tucke130@msu.edu</a>	Soo Jeong Lee	1/15	4/22
Thursday	Wenjia Cao, <a href="mailto:caowenj1@msu.edu">caowenj1@msu.edu</a>	Jarret Hoffman <a href="mailto:hoffm453@msu.edu">hoffm453@msu.edu</a>	1/15	4/22

**Who Should Take This Class?** This class will be a mathematically demanding and reasoning-intensive class. You are encouraged to take this class if you enjoy solving challenging problems and enjoy learning about the fascinating topic of microeconomics, the fundamental building block for all of economics. The main mathematical prerequisite is single-variable calculus MATH124. However, those who have advanced math preparations have routinely done well in this class. Expect to learn new mathematics and statistics in this class! The rudiments of probability and constrained optimization are introduced when needed. In order to do well in this class, you should

1. regularly attend lectures and participate in discussions
2. work hard on the problem sets and understand every step of every problem, and
3. relate abstract concepts introduced in lectures to everyday life and economic activities.

**Textbook.** The recommended textbook is **Bernheim and Whinston, Microeconomics, Second Edition**. First edition is acceptable. I follow the book closely, so it is easy for students to preview before the lecture and review after the lecture. I also post my class notes after class.

**Lectures.** There will be in-class exercises in every class that count towards your final grade. Selected lecture notes will be posted after each lecture. Note that the notes should serve only as complements to lectures, rather than substitutes for lectures. All the contents covered in the class form the basis for the exam. Therefore, class attendance is required. I plan to lecture for 60 minutes and leave up to 20 minutes for in-class exercises. Because of time limitation, in-class exercises are usually easier than the homework.

**Problem Sets.** There will be 8 problem sets. Problem sets serve as additional exercises to improve and deepen your understanding of the course materials. You must turn in problem sets individually. You should understand every question on the problem set, as these problems form the basis of the questions on the exams. All problem sets are due at the **beginning** of the class. Late submissions during class incur a 20% penalty. **No** later submission is accepted. Early submissions are encouraged.

**Exams.** There will be one math prerequisite exam and 4 exams. Lectures and problem sets form the basis of the materials in the exams. Each exam focuses on the most recent topics but knowledge from previous exams is required. Exams are *closed book*, but one double-sided letter-sized (8.5in×11in) typed or hand-written cheat-sheet is allowed. Each exam consists of three types of questions: (1) the exact questions that have appeared in the problem sets, (2) variants of the questions that have appeared in the problem sets (for example, with number changed, with parts deducted), and (3) questions that can be answered if you have mastered the knowledge taught in the lectures. **There is no make-up offered for each exam: anyone who does not take an exam receives a score of 0 on the exam.** If you are excused from an exam due to medical or family emergency, your make-up exam will be a **comprehensive final exam** in the finals week.

**Grading Policy.** The grade is calculated as follows.

1. Class participation is 20% of your grade. Coming to and actively participating in a lecture counts as 1% of your grade. I offer bonus points in class from time to time. There is no make up for a missed class, but there are more than 20 classes in a semester.
2. Problem sets are 20% of your grade. You can drop your lowest problem set, so each of the other seven problem sets is worth 3% of your grade ( $7 \times 3\% = 21\%$ ). I post challenging questions on the homework that earn bonus points.
3. Exams are 60% of your grade. The math prerequisite exam counts for 5%. Of the other four exams, the lowest counts for 10% and each of the other three exams counts for 15%. If you are excused from an exam due to medical or family emergency, your make-up exam will be a **comprehensive final exam** in the finals week. Since the course materials get more and more difficult, I strongly advise

you against skipping your first problem sets and not showing up for the first exam, hoping to ace the subsequent parts of the materials.

Overall, 90% is required for a 4.0, 75% is required for a 3.0, and 60% is required for a 2.0. I do not “curve” the class in the sense that I do not add points to your raw scores.

**Honors Option.** Unfortunately, no honors option is offered for this class. If you want to take an honors intermediate microeconomics class, you are recommended to enroll in EC251H.

**Recommendation.** Many have asked me for recommendation letters for graduate schools. I am always very happy to write you a recommendation letter to help you succeed, *if* I believe that I can write you a strong letter that improves your chance in graduate admissions. I can write a strong letter if (1) you have a 4.0 or near-4.0 GPA in the class, AND (2) you have interacted with me one-on-one in office hours and other occasions for sufficiently many times. If I do not know you well personally, even if you have a near-perfect score in the class, it will not help your graduate admission substantially, and I am not comfortable supporting someone who I don’t know well. Please also fill out this form before you ask for recommendation: <https://reg.msu.edu/read/StudentReferenceRequestReleaseForm.pdf>.

**RCPD/Grief Absence/Medical Emergency/Religious Observance.** If you need alternative test site authorization, please fill out the necessary forms 7 days before the exam for me to be able to accommodate you for the exam. Please inform me as soon as possible when other situations arise.

## Course Outline

Class	Date	Administrative	Content
1	Tuesday, 1/07		Introduction to Microeconomics
2	Thursday, 1/09	<i>open add ends</i>	Mathematics for Economists
3	Tuesday, 1/14	PS 1 due	Balancing Benefits and Costs
4	Thursday, 1/16		<b>Exam 0: Math Prerequisite</b>
5	Tuesday, 1/21		Numerical Representation of Preferences
6	Thursday, 1/23		Graphical Representation of Preferences
7	Tuesday, 1/28	PS 2 due	Review for Exam 1
8	Thursday, 1/30	<i>drop with refund ends</i>	<b>Exam 1: Introduction</b>
9	Tuesday, 2/04		Consumer Constraint
10	Thursday, 2/06		Consumer Choice: Special Cases
11	Tuesday, 2/11	PS 3 due	Consumer Choice: General Cases
12	Thursday, 2/13		Individual Demand
13	Tuesday, 2/18		Market Demand
14	Thursday, 2/20	PS 4 due	Review for Exam 2
15	Tuesday, 2/25	<i>drop without grade ends</i>	<b>Exam 2: Demand</b>
16	Thursday, 2/27		SLACK
17	Tuesday, 3/10		Production Function
18	Thursday, 3/12	PS 5 due	Deriving Cost Function from Production Function
19	Tuesday, 3/17		Properties of Cost Function
20	Thursday, 3/19		Profit Maximization and Supply Curve
21	Tuesday, 3/24	PS 6 due	Review for Exam 3
22	Thursday, 3/26		<b>Exam 3: Supply</b>
23	Tuesday, 3/31		Competitive Market
24	Thursday, 4/02		Monopoly
25	Tuesday, 4/07		Dominant Strategies
26	Thursday, 4/09	PS 7 due	Dominated Strategies
27	Tuesday, 4/14		Nash Equilibrium
28	Thursday, 4/16		Oligopoly
29	Tuesday, 4/21	PS 8 due	Review for Exam 4
30	Thursday, 4/23		<b>Exam 4: Market</b>