Course Syllabus\(^{†}\), Fall 2018

SECTION INFORMATION

<table>
<thead>
<tr>
<th>Section</th>
<th>Day</th>
<th>Time</th>
<th>Room</th>
<th>Instructor</th>
<th>Office hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>612-001</td>
<td>T/Th</td>
<td>9-10:30</td>
<td>JMHH 255</td>
<td>Benjamin Lockwood</td>
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<td>612-002</td>
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<td>Daniel Grodzicki</td>
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<td>Juuso Toikka</td>
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<td>Gizem Saka</td>
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<td>1:30-3</td>
<td>JMHH 240</td>
<td>Gizem Saka</td>
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</table>

READINGS

The principal readings for the course will take the form of short popular press articles, posted on Canvas. Each class session will have one to three articles assigned for reading in advance of class. For students who wish to supplement the lectures, the primary textbook is “Microeconomics”, B. Douglas Bernheim and Michael D. Whinston, 2nd Edition, McGraw-Hill [BW below]. It is not mandatory, but may be useful for students with no or little background in economics, or those who have not seen similar material in many years. The text is available at the bookstore.

\(^{†}\) Updated October 12, 2018
Before each class, we expect all students to have read the assigned popular press articles for that class to facilitate a classroom discussion on the lecture’s lesson. PDF versions of the assigned articles are available under “Files\Reading” on Canvas.

TEACHING ASSISTANTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Grades for...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephen Kozhimala</td>
<td><a href="mailto:skoz@wharton.upenn.edu">skoz@wharton.upenn.edu</a></td>
<td>Sections 001, 002</td>
</tr>
<tr>
<td>Nikhil Goyal</td>
<td><a href="mailto:nikgoyal@wharton.upenn.edu">nikgoyal@wharton.upenn.edu</a></td>
<td>Sections 003, 004</td>
</tr>
<tr>
<td>Minwoo Choi</td>
<td><a href="mailto:minwooc@wharton.upenn.edu">minwooc@wharton.upenn.edu</a></td>
<td>Sections 005, 006</td>
</tr>
<tr>
<td>Vananth Subramanian</td>
<td><a href="mailto:wasanth@wharton.upenn.edu">wasanth@wharton.upenn.edu</a></td>
<td>Sections 007, 008</td>
</tr>
<tr>
<td>Manan Agarwal</td>
<td><a href="mailto:mananag@wharton.upenn.edu">mananag@wharton.upenn.edu</a></td>
<td>Sections 009, 010</td>
</tr>
<tr>
<td>Julie McGibbon</td>
<td><a href="mailto:Julie.m.mcgibbon@gmail.com">Julie.m.mcgibbon@gmail.com</a></td>
<td>Sections 011, 012</td>
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</table>

TAs are responsible for holding office hours, teaching TA sessions, and performing grading. For the most part, we request that you not email TAs, and rather ask questions on the central MGEC 612 Wiki site—this allows all students to benefit from your question, and prevents the TAs from having to answer the same thing several times.

Questions posted to the MGEC 612 Wiki on weekdays will be answered within 24 hours; questions posted on weekends will be answered by end of day on Monday. (Meaning, if you want an answer by 4pm on Wednesday so you can have time to finish your problem set due 4pm on Thursday, submit your question by 4pm on Tuesday. Questions posted about the problem set after 4pm the day before the due date may not be fully answered.)

TA office hour schedule:

Office hours begin in the week of October 29 and extend through the week of December 10, with the exception of the week of November 19 (Thanksgiving).

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
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<tbody>
<tr>
<td><strong>3:00-4:30 pm</strong></td>
<td>Vasanth Subramanian SHDH 213</td>
<td>Nikhil Goyal JMH 265</td>
<td>Minwoo Choi SHDH 213</td>
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<tr>
<td><strong>4:30-6:00 pm</strong></td>
<td></td>
<td>Julie McGibbon SHDH 109</td>
<td>Steve Kozhimala SHDH 209</td>
</tr>
<tr>
<td><strong>6:00-7:30 pm</strong></td>
<td>Manan Agarwal SHDH 209</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TA office hours are a time to receive one-on-one help from TAs. This is essentially free “tutoring” time, when the TA can go through any concepts you might be struggling with. We do ask, however, that students not ask directly about the
problem sets in office hours. Instead, please come prepared to ask for help with similar questions, or the general concept being covered by a certain problem. If you have clarifying questions on problem sets, please ask them on the MGEC 612 Wiki.

**TA RECITATIONS**

Lecture time is scarce, and will thus be targeted at conveying the core concepts, motivating the intuition behind the concepts and their usefulness, providing an outline of how to solve problems, and class discussion. If you have not taken economics before, do not have a quantitative background, or find yourself struggling to understand the slides, you can go to TA sessions (also called “recitations”) for more details on how to solve problems and step-by-step description of the math involved. This combination of lecture plus TA recitation sessions allows us to target lecture to the “median student,” with recitation to supplement for students who find the pace too fast. While going to recitation is not mandatory, it will be extremely helpful if you struggle to understand the lecture materials. The TA will go through the problems solved in lecture more slowly, in greater detail, as well as doing supplementary problems when time allows. There will also be fewer students in each TA session, which will allow you to ask questions and receive more customized assistance.

You do not need to register for TA recitation sessions, but should plan to choose the one that fits your schedule and attend it regularly.

The TAs will also hold reviews for the final exam, which will be announced closer to the end of the quarter.

**TA recitation schedule:**

TA recitations begin in the week of October 29 and extend through the week of December 10, with the exception of the week of November 19 (Thanksgiving). In a given week, all TA sessions will cover the material from the Tuesday and Thursday lectures of the previous week of instruction.

<table>
<thead>
<tr>
<th>TA</th>
<th>Day</th>
<th>Time</th>
<th>Room</th>
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<tbody>
<tr>
<td>Stephen Kozhimala</td>
<td>Wednesday 3-4:30 pm</td>
<td>SHDH 107</td>
<td></td>
</tr>
<tr>
<td>Nikhil Goyal</td>
<td>Tuesday 4:30–6 pm</td>
<td>SHDH 1201</td>
<td></td>
</tr>
<tr>
<td>Minwoo Choi</td>
<td>Wednesday 4:30-6 pm</td>
<td>JMHH G50</td>
<td></td>
</tr>
<tr>
<td>Vasanth Subramanian</td>
<td>Thursday 6-7:30 pm</td>
<td>VANC B11</td>
<td></td>
</tr>
<tr>
<td>Manan Agarwal</td>
<td>Monday   4:30-6 pm</td>
<td>JMHH G50</td>
<td></td>
</tr>
<tr>
<td>Julie McGibbon</td>
<td>Tuesday   3-4:30 pm</td>
<td>JMHH F65</td>
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</tr>
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**MATHEMATICAL REQUIREMENTS**

In this class, you are required to be able to do algebra and calculus. If you struggle with these, you may consider investing in a graphing calculator (TI-89) that can take derivatives for you. To be successful in this class, you should:
1. Be able to graph an equation, especially a linear equation.
2. Be able to solve a system of two linear equations and two unknowns.
3. Be able to compute the derivative of a simple equation.
4. Know how to find the maximum or minimum of a function using derivatives.

GRADING POLICIES
1. We encourage students to work together with their learning teams to solve the problem sets. However, each student must write up and submit an individually generated problem set. If you need to collaborate with someone outside your learning team, please write their name on your problem set, e.g., “Additionally consulted: Susan C. Wharton.” Working together with your learning team is a great way to build a community that will be with you throughout your Wharton experience, and to learn from one another’s strengths.

2. Problem sets should be submitted to the section-labeled hanging folders just inside 1041 Steinberg Hall-Dietrich Hall (i.e. the smaller door to the left of the main entrance to the 1400 suite). Please submit your problem set to the correct folder associated with your section. The door will be closed at 4 pm on the day of the deadline. Please be mindful that this is a working office. **Submissions will not be accepted once the door is closed, and submissions will not be accepted through any other method, including email.**

3. The exam is closed book, but a one-page (front and back) formula/note sheet is allowed along with a stand-alone (not a phone or a computer) calculator (details to be discussed in class).

4. Each problem set is graded on a twenty-point scale across all problems in the problem set. Full points will be given for correct answers showing the derivations. Points will be subtracted for mathematical and logical errors. Zero points will be given for no answers OR correct answers without supporting derivation.

5. If you wish to dispute a grade on an assignment or an exam, you must do so by set deadlines. For problem sets, this deadline will be the Friday after the problem sets are handed back. For exams, the deadline will be announced, but will be no more than 1 week after the exams are available for pickup. In order to file a dispute, you must ante up 5% of the value of the assignment. If we conclude that your dispute is valid, you will receive the 5% back, but if not, we will keep it. We also reserve the right to re-grade all parts of a
disputed assignment, not only the specific parts you wish to dispute. Finally, your dispute must be put into writing, attached to the original graded problem set or exam, and submitted to the same place that the homework assignments are submitted, by 4 pm on the dispute deadline. Again, disputes will not be accepted beyond the deadline, which will be no more than 1 week after graded materials are available for review, and disputes will not be accepted through any other method.

6. **Any evidence of cheating is sent immediately to the Dean.**

7. Your score for the course will be calculated according to the following table. Course grades will be “curved” by individual instructors.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Due Date</th>
<th>% Of Grade</th>
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<tbody>
<tr>
<td>Problem Set 1</td>
<td>Tuesday, Nov. 13 (4pm)</td>
<td>13%</td>
</tr>
<tr>
<td>Problem Set 2</td>
<td>Tuesday, Dec. 4 (4pm)</td>
<td>13%</td>
</tr>
<tr>
<td>Problem Set 3</td>
<td>Wednesday, Dec 12 (4pm)</td>
<td>13%</td>
</tr>
<tr>
<td>MGEC 612 Exam</td>
<td>Monday, Dec 17 (9am)</td>
<td>50%</td>
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<tr>
<td>Attendance and Participation</td>
<td>–</td>
<td>11%</td>
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</table>

**CLASSROOM POLICIES**

1. Each student must sit in his or her assigned seat with name-card displayed.
2. You are expected to have read the assigned articles before class. We suggest that you briefly discuss them with your learning teams as well.
3. We will cold-call people. If this is an issue for you, please discuss it with your instructor.
4. If you would like to take notes electronically, tablets — but not laptops or smartphones — can be used in the classroom.
5. Wharton “concert rules” apply: be seated when class is scheduled to start and don’t leave the room unless absolutely necessary.

**ATTENDANCE POLICIES**

We will rely on the attendance app developed by the MBA Program Office (MBAPO) in conjunction with the seating chart to record attendance. Arriving FIVE or more minutes late for class is treated as an absence and absences will be excused only
for the specific reasons listed on the MBAPO website (personal illness, personal or family emergency, and religious holidays for observant students).

If you were marked absent for class erroneously, you can log into SPIKE and enter an explanation. Please note that absences due to late check-in or forgetfulness cannot be removed or excused, per the MBA Program Attendance Policy for fixed core classes. However, the explanation will be taken into account when evaluating attendance data. Please review the full attendance policy here:


HOW TO BE SUCCESSFUL IN THIS CLASS

This is a quantitative class, and the exams will test your ability to solve problems with the tools we learn, rather than your memorization of facts. Because of this, the best way to study is to go through the problems we do in class and redo the problem sets carefully on your own. Repetition, in particular of actually answering quantitative problems yourself, is very helpful.

We recommend going through the lecture notes between classes with a pen and paper, doing the example problems out long-form. Additionally, working through the problem sets is not merely busy-work for a grade — they are truly the best preparation for the exam!

If you are struggling, please go to office hours and TA sessions early in the term—do not wait until you are behind!
LIST OF LECTURES AND TOPICS

Note: please refer to each professor’s page for the day’s articles

Unit 1: Oligopoly

1. Oct 23: Undifferentiated Oligopoly
   1. Bertrand Competition: Choosing Price
   2. Cournot Competition: Choosing Quantity
   3. Horizontal mergers

   Textbook: BW Chapter 19.1-19.4

2. Oct 25: Collusion and Entry-Deterrence
   1. Collusion
   2. First-mover advantage
   3. Entry deterrence

   Textbook: BW Chapter 19.6-19.7

3. Oct 30: Differentiated Oligopoly
   1. Price competition
   2. Monopolistic Competition: Competitive Pricing with Market Power
   3. Application to advertising

Unit 2: Price Discrimination

4. Nov 1: Price discrimination I: Perfect and Demographics
   1. Different types of Price Discrimination: how well are you able to target consumers with different tastes
   2. Perfect price discrimination: applications and outcomes
   3. Pricing on demographics

   Textbook: BW Chapter 18.1-18.4 (readings overlap with Lecture 8)

5. Nov 6: Price Discrimination II: Self-Selecting and Quantity-Based
   1. Self-selecting prices
   2. Versioning, “Damaged Goods”
   3. Quantity discounting
   4. Membership pricing

   Textbook: BW Chapter 18.1-18.4 (readings overlap with Lecture 7)

6. Nov 8: Price Discrimination III: Two-Part Tariffs and Menu Pricing
   1. Self selecting + Quantity=Menu pricing
   2. Optimal two-part tariffs with one consumer, or perfect discrimination
   3. Two-part pricing to markets with multiples types of consumers

   Textbook: BW Chapter 18.2 (from p. 631), 18.4 (p. 644-648)
PROBLEM SET 1 DUE TUESDAY, NOVEMBER 13

   1. Capturing surplus from bundling goods together
   2. When “Pure” and “Mixed” bundling strategies are profitable.
   3. Tying goods together.

   **Textbook:** BW Chapter 18.5

Unit 3: Uncertainty and Private Information

8. Nov. 15: Dealing with Uncertainty
   1. Risk preferences and risk aversion
   2. Buying insurance: Paying to mitigate risk
   3. Behavioral evidence of risk aversion

   **Textbook:** BW Chapter 11

9. Nov. 27: Auctions
   1. Common issues in auction design and format
   2. Bidding functions in different auctions
   3. The winner’s curse
   4. Considerations when running or bidding in auctions

10. Nov 29: Adverse Selection
    1. Strategic interaction where one party knows more than the other
    2. Market outcomes under asymmetric information
    3. Signaling and screening to overcome adverse selection

   **Textbook:** BW Chapter 21.1-21.3

11. Dec 4: Moral Hazard: Incentivizing workers and beyond
    1. The issues of unobserved effort and unobserved preferences
    2. Sales force motivation
    3. Efficiency wages
    4. Executive compensation

   **Textbook:** BW Chapter 21.4
PROBLEM SET 2 DUE TUESDAY, DECEMBER 4

12. Dec 6: Review

PROBLEM SET 3 DUE WEDNESDAY, DECEMBER 12

MGEC 612 EXAM – Dec. 17, 9-11am