

INTERMEDIATE MICROECONOMICS

INTRODUCTION

SPRING 2019, PROFESSOR ANH NGUYEN

Introduction: Instructor



- Ph.D. in Economics from Columbia University
- My research:
 - Empirical analysis of interaction between firms, governments, and consumers
 - Theoretical analysis of the design of information flow
 - Insurance market regulation
- Email: anhnguyen@cmu.edu
- Office Hours: Mondays, 9-10AM, Tepper 5209



Introduction: Teaching Assistants

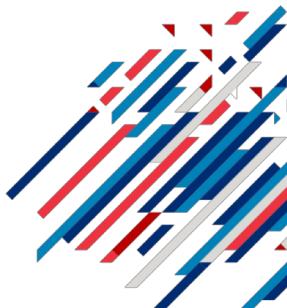


- **Ali Polat**

- PhD student in economics
- polat@cmu.edu
- Office Hours: TBA

- **Majid Mahzoon**

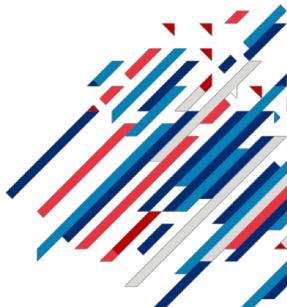
- PhD student in economics
- mmahzoon@cmu.edu
- Office Hours: TBA



Why Microeconomics?



- Microeconomic models explain **how** economic decisions are made and allow us to make ***predictions***
 1. Consumers
 2. Firms
 3. Governments



Consumer Choice: Key Concepts



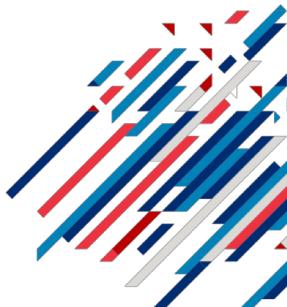
- Trade-off
 - $MB(\text{Alternative 1}) = MB(\text{Alternative 2})$
 - Studying for an exam vs. Going to a party
 - # Hours studying vs. # Parties
- We study trade-offs in the market
 - Price enters into the equation
 - $$\frac{MB(\text{Alternative 1})}{MB(\text{Alternative 2})} = \frac{\text{Price 1}}{\text{Price 2}}$$



Consumer Choice: Tool Box



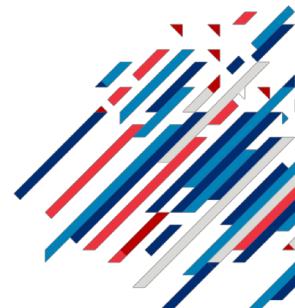
- Framework to represent consumer's problem
 - Mathematically
 - Graphically
- Background mathematics
 - Optimization over multiple variables (multivariate calculus)



Consumer Choice: Take-away



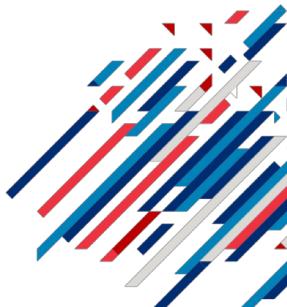
- Predict individual consumer's optimal response to policies or external changes
 - Social programs (e.g. food stamps)
 - Taxation (e.g. labor income tax, capital tax, etc.)
- Optimality is the key: We recognize that humans think, and think rationally (to some extent at least)



Producer Choice: Key Concepts



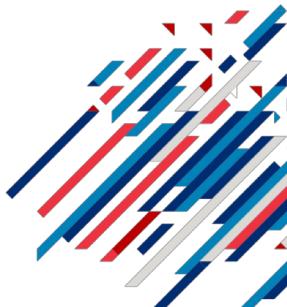
- Entry and Exit
- Input choice:
 - Similar to consumer's decisions
 - Derive firm's cost function
- Pricing:
 - Perfectly competitive market
 - Monopoly
 - Oligopoly



Producer Choice: Tool Box



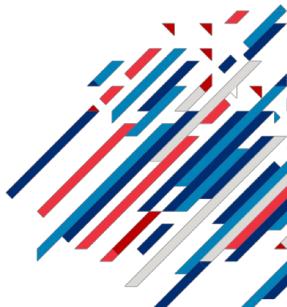
- What we learn in the consumer choice
- Game theory (Game theory – ECON 73347 is an **excellent** course to take)
 - Understand the interaction of players
 - Strategic thinking
 - Apply to firm vs. firm, firm vs. government



Producer Choice: Take-away



- Predict market equilibrium under each market condition



Government Choice: Key Concepts

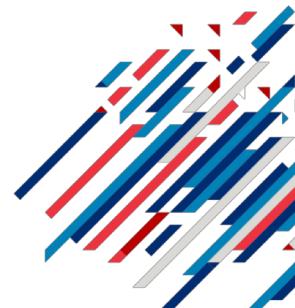
- Under what conditions, should a government intervene the market?
 - An economist's answer: When market fails
- Market failure:
 - Non-competitive markets
 - Externalities
 - Public goods
 - Asymmetric information



Government Choice: Take-away



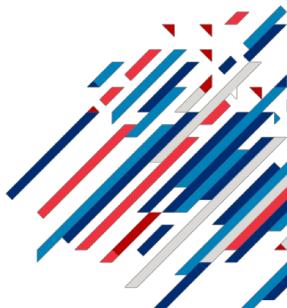
- A consistent point of view on the role of government and social welfare



Assessments (1): Exams



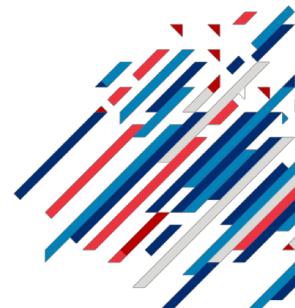
- Two midterms (15% and 15%) and one final (35%):
 - Midterm I: Feb 27 (Consumer theory)
 - Midterm II: April 08 (Producer theory)
 - Final: During the final week (All topics)
- Re-grading requests: In writing, within a week
- Make-up exam policy: See the syllabus



Assessments (2): Problem Sets



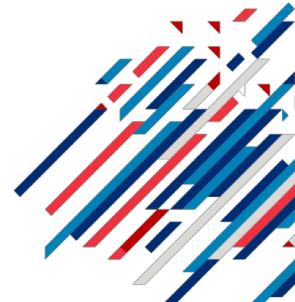
- Four problem sets (4% each)
 - Due dates are on the syllabus.
 - Useful exercises for the exams.
 - Late submissions are NOT accepted.
 - Work in groups is a good idea.
 - You are expected to write up your own answers.
 - List the names of people that you worked with on the front page.



Assessments (3): Weekly Quizzes



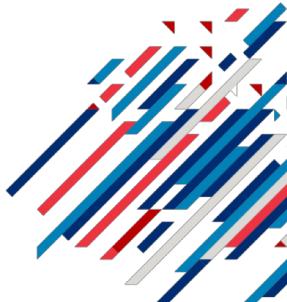
- Eight weekly online quizzes (1% each)
 - Canvas, due on Thursdays 5PM.
 - Late quizzes will NOT be graded under any circumstances.
 - *Two lowest scores will be dropped in calculating the final grade.*



Assessments (4): In-class Participation



- In-class participation (10%)
 - <http://tinyurl.com/73230-Spring19>
 - *No penalty for up to 3 absences in lectures and recitations respectively.*



Assessments (5): Summary



- Your final grade will be based on the maximum of

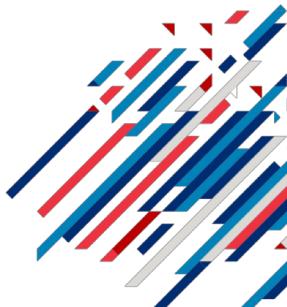
	Case 1	Case 2
Final Exam	35%	45%
Midterms	30%	30%
Problem Sets	16%	16%
Weekly Quizzes	9%	9%
In-class Participation	10%	0%



Readings



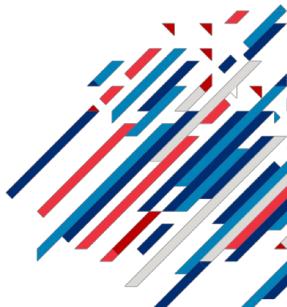
- Textbook:
 - Nechyba, *Microeconomics: An Intuitive Approach with Calculus*
- Useful books:
 - Frank, *Microeconomic Behavior* (online for free)
 - Varian, *Intermediate Microeconomics*
- All books are on reserve in Hunt Library.
- Slides will be used in lectures.



Useful Tips for Your Study



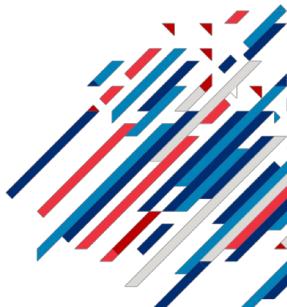
- Lectures can only provide an overview of material.
- Emphasis in lectures is on understanding the tools used to analyze economic issues.
- Recitations help solve problems to strengthen your understanding.
- Depending on background, the materials we cover may be very difficult and the pace may seem fast.



Useful Tips for Your Study

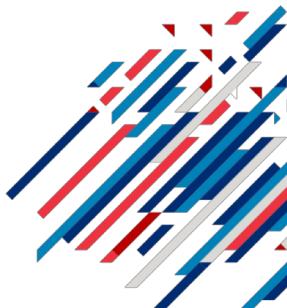


- You are expected to go over the materials **at least 6 hours** every week
 - Before lecture:
 - Print out the slides
 - Read the relevant parts in the textbook (see syllabus)
 - After lecture:
 - Review the slides, the textbook, and your notes
 - Do the textbook exercises, quizzes, and problem sets
 - Come to office hours



Useful Tips for Your Study

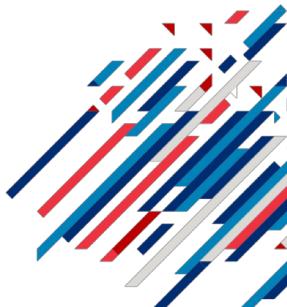
- Form a study group of 2-5 students
 - Work on problem sets together
 - Come to office hours together
 - Become a teacher to one another



Useful Tips for Your Study



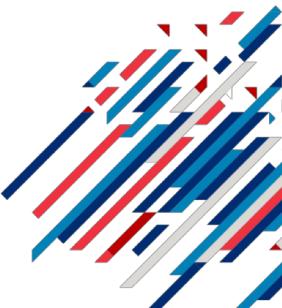
- Office hours are an invaluable source of extra help
- Do not hesitate to come to office hours
- Feel free to come with your group even if you don't have questions of your own
- Office hours:
 - Mine: Mon., 9-10AM, Tepper 5209
 - T.A.'s: TBA



Feedback



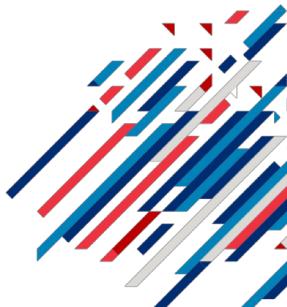
- Online anonymous evaluation form:
 - <https://tinyurl.com/73230-Spring19-Evaluation>
 - You can submit this form any time for as many times as you want. Feel free to use this if you have any comments, for example if you'd like a review of difficult concepts or problems from previous lectures



Course Policy

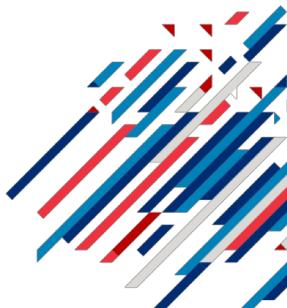


- Learning accommodation: Let me know soon!
- Email communication
 - Sign off with your full name.
 - Emails sent on Mon-Thurs: Response within 24 hrs.
 - Emails sent on Fri-Sun: Response on the following Monday
- Academic integrity: See the syllabus



Conclusion

- This is one of the most challenging courses because it requires multiple skills:
 - Understanding abstract concepts
 - Solving analytical problems with calculus
 - Applying theory to real-world problems



Course Schedule



See Syllabus (last 2 pages)

Carnegie Mellon University

Tepper School of Business

William Larimer Mellon, Founder

