

# **ECONS 501 - MICROECONOMIC THEORY-I**

## **FALL 2025**

**Instructor:** Ana Espinola-Arredondo

**Lectures:** Tuesdays and Thursdays, 10:35-11:50a.m. JANX C0105

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**TA:** A S M Mirajul Islam

**Office hours:** Mondays 2pm-3pm. Hulbert 301D.

**Review sessions:** Fridays 11am-12pm. Clark 147

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### *Course Rationale*

This course analyzes the individual behavior of individuals, consumers, and firms. The focus of the course will mainly be theoretical, although several applications and empirical implications will be discussed.

### *Course Objectives and Learning Outcomes*

The main objective of the course is to make students be able to apply the tools of advanced microeconomic theory to understand and model individual decision making. In addition, the topics learned in this course should prepare the student for a better understanding of the concepts he/she will learn in the spring sequence of the Micro theory course. Furthermore, the theoretical approach of the course (and many of the mathematical tools explained) will set stronger foundations for analyzing economic problems, not only from a microeconomic perspective but also in other fields in economics.

### *Prerequisites:*

Intermediate Microeconomics is recommended and some college algebra and calculus is also expected. Some books on mathematical methods in economics are suggested below, as a helpful support during the course, and are strongly recommended.

### *Required Text:*

Felix Munoz-Garcia. *Advanced Microeconomic Theory: An Intuitive Approach with Examples*. 2017. ISBN: 9780262035446. You can find it at the Washington State University Bookstore ("Bookie").

Andreu Mas-Colell, Michael Whinston, and Jerry Green. (MWG) *Microeconomic Theory*. Oxford University Press, 1995. ISBN: 0195073401. You can find it at the Washington State University Bookstore ("Bookie").

### *Recommended Reading (Microeconomics):*

- Walter Nicholson and Christopher M. Snyder (NS) *Microeconomic Theory: Basic Principles and Extensions*. South Western College Publ. (11<sup>th</sup> edition, 10<sup>th</sup> edition is also ok). [This book is good complement to MWG in terms of intuitive reasoning. It is especially useful as a bridge between Intermediate Micro and graduate level micro theory]. I especially encourage you to read Chapter 2 on useful mathematics for microeconomic theory. In addition, I highly recommend you to read the corresponding chapter of the textbook before starting to read MWG.
- Hugh Gravelle and Ray Rees. (GR) *Microeconomics*. Prentice Hall. (2<sup>nd</sup> or 3<sup>rd</sup> edition). [A good complement to MWG in terms of intuitive reasoning. It is especially useful as a bridge between Intermediate Micro and graduate level micro theory].
- Eugene Silberberg and Wing Suen. (SS) *The Structure of Economics. A Mathematical Approach*. McGraw-Hill (Any edition might work).
- Geoffrey Jehle and Philip Reny. (JR) *Advanced Microeconomic Theory*. 2nd ed. Reading, MA: Addison-Wesley, 2000. ISBN: 0321079167. [More readable than MWG and more concise].
- Ariel Rubinstein. *Lecture notes on Microeconomic Theory: the economic agent*. Princeton University Press, 2006. ISBN: 0691120315. Downloadable for free at the following link: <http://arielrubinstein.tau.ac.il/Rubinstein2007.pdf> [Only recommended for the first chapters].
- Hal Varian. *Microeconomic Analysis*. 3rd Ed. New York, NY: W.W. Norton, 1992. ISBN: 0393957357. [Very concise].
- John G. Riley. *Essential Microeconomics*. Cambridge University Press, 2012. ISBN: 0521827477. [Good for the part on uncertainty, and later on for general equilibrium.]
- David Kreps. *Microeconomic Foundations I: Choice and Competitive Markets*. Princeton University Press, 2012. ISBN: 0691155836. [Good for the foundations.]
- Elmar Wolsftetter. *Topics in Microeconomics: Industrial Organization, Auctions, and Incentives*. Cambridge University Press, 1999. ISBN: 0521645344. [Really good for applications on uncertainty, industrial organization and auctions.]
- I strongly recommend using an Intermediate Micro textbook as a support for the intuition behind the theoretical concepts we will discuss in class. You can choose some textbook you might be familiar with, but I include some below (Any edition might work):
  - Michael Wetzstein. *Microeconomic Theory: Concepts and Connections*. Cengage Publishing. ✓
  - Nechyba, Thomas. *Microeconomics. An intuitive approach with calculus*. South-Western publishing, 2010. ✓
  - Hal Varian. *Intermediate Microeconomics*. W.W. Norton.
  - Jeffrey F. Perloff. *Microeconomics: Theory and Applications with Calculus*. Addison-Wesley. ✓
  - David Besanko and Ronald R. Braeutigam. *Microeconomics*. Wiley.

### *Other recommended Reading (Mathematics):*

Most comprehensive:

- Carl P. Simon and Lawrence E. Blume. *Mathematics for Economists*. W. W. Norton.
- Michael Hoy, John Livernois, Chris McKenna, Ray Rees and Anthanasios Stengos. *Mathematics for Economists*. MIT Press.

- Angel de la Fuente. *Mathematical methods and models for economists*. (Any edition might work). Cambridge University Press. [Good macro applications].

Also recommended (refreshing undergrad mathematics):

- Alpha Chiang. *Fundamental Methods of Mathematical Economics*. (Any edition). McGraw-Hill.
- Knut Sydsaeter and Peter I. Hammond. *Mathematics for Economic Analysis*. (Any edition) Prentice Hall.
- Michael Klein. *Mathematical Methods for Economics*. (Any edition might work) Addison-Wesley.

Also recommended (although not so comprehensive):

- Robert G. Bartle and Donald R. Sherbert. *Introduction to real analysis*. 3<sup>rd</sup> edition. Wiley. [A gentle introduction to real analysis].
- Russel A. Gordon. *Real Analysis, A first course*. Second edition. Addison Wesley. [Another gentle introduction to real analysis.]
- William Trench. *An Introduction to Real Analysis*. Free downloadable textbook at: <http://ramanujan.math.trinity.edu/wtrench/misc/index.shtml>. [Recommended if you never had courses on real analysis before.]
- Rangarajan K. Sundaram. *A first course in optimization theory*. Cambridge University Press. [Good connection of real analysis with maximization problems.]

### *Lectures:*

Lectures will be in person on Tuesdays and Thursdays 10:35–11:50a.m. Attendance is very important to your success in this class.

### *Review Sessions (Practice sessions):*

Your teaching assistant, *Will*, will be holding review sessions every week. You will cover exercises similar to those you will have to solve in your homework assignments and exams. The TA will go over each step that you have to use in order to solve these exercises. Attendance is strongly recommended, and has proven very useful in previous editions of this course.

Time: Fridays, 11:00-12:00pm.

Location: *Clark 147*.

### *Class materials:*

All class materials (handouts, homework assignments, answer keys, etc.) will be posted on the website: <https://anaespinoalarredondo.com/econs-501-microeconomic-theory-i/>

### *Grading:*

Your grade for the course will be based on:

- Problem sets (35%),
- Two midterms (20% each), and
- Final exam (25%).

*Exam dates:*

**Midterm #1:** Tuesday, October 7<sup>th</sup>.

**Midterm #2:** Thursday, November 18<sup>th</sup>.

**Final exam:** Wednesday, **December 8<sup>th</sup>, 10:30am-12:30p.m.**

Make-up exams will only be given if you have a note from a doctor indicating that you were unable to take the exam at the scheduled time.

*Attendance and Participation:*

Students are expected to attend all scheduled class times, as attendance and participation contribute significantly to learning in this course. If you feel miss a class, it is your responsibility to find out from an informed student what occurred in class, what assignments may have been given, etc. Assignments are due at the beginning of class (as described below). Late work is subject to significant grade reduction, depending upon the assignment.

## DESCRIPTION OF COURSE REQUIREMENTS

*Homework:*

Homework assignments will be posted on the course website (almost) every Tuesday, and they must be submitted the next Tuesday at the beginning of the class *via email*. Make sure you give yourself enough time to complete the problem sets. You are encouraged to work in groups, although an individual homework assignment must be submitted per student. Working in groups has proven to be a very successful learning technique for previous students of this course. Additional practice problems will be provided if required.

*Grading scale:*

A	88-100	C	55-59
A-	80-87	C-	50-54
B+	74-79	D+	45-49
B	70-75	D	40-44
B-	65-69	F	0-39
C+	60-64		

*Course Schedule:*

The course schedule is tentative and subject to change depending upon the progress of the class. When more than a reading is suggested for a given topic, the ✓ sign marks those that are especially recommended.

1. August 19<sup>th</sup> – 21<sup>st</sup>.
  - Preference Relations and Consumer Choice.
  - MWG: Chapters 1 and 2 ✓; JR: Chapters 1.1-1.3; and Rubinstein: Lectures 1 and 3.
2. August 26<sup>th</sup> – 28<sup>th</sup>.
  - Demand Theory: Preferences and Utility.
  - MWG: Chapters 3A-3D ✓; JR: 1.3; GR: 2A-2C ✓; and Rubinstein: Lectures 2, 4 and 5.
3. September 2<sup>nd</sup> and 4<sup>th</sup>.
  - Demand Theory: Duality.
  - MWG: 3E-3G ✓; JR: 1.4, 1.5, 2.1; GR: 3A-3B ✓; Rubinstein: Lecture 6.
4. September 9<sup>th</sup> – 11<sup>th</sup>.

- Demand Theory: Measuring welfare changes.
  - MWG: 3I; and GR: 3C-3D. ✓
5. September 16<sup>th</sup> – 18<sup>th</sup>.
- Demand Theory: Applications.
  - GR: Chapter 4, SS: 10.7 and 11.3-11.6.
6. September 23<sup>rd</sup> – 25<sup>th</sup>.
- Aggregate Demand.
  - MWG: 4A-4C.
7. September 30<sup>th</sup> – October 2<sup>nd</sup>.
- Aggregate Demand and Production.
  - MWG: 5A-5C ✓; JR: 3.2.
8. October 7<sup>th</sup> – 9<sup>th</sup>. (Monday): **First Midterm Exam.**
- Production and Costs.
  - MWG: 5D-5G ✓; JR: 3.3-3.5; SS: 8 and Rubinstein: Lecture 7.
9. October 14<sup>th</sup> – 16<sup>th</sup>.
- Choice under uncertainty.
  - MWG: 6A-6B ✓; SS: 13, and GR: 17A-17D.
10. October 21<sup>st</sup> – 23<sup>rd</sup>.
- Choice under uncertainty.
  - MWG: 6C-6E ✓; GR: 17E-17G.
11. October 28<sup>th</sup> – October 30<sup>th</sup>.
- Competitive Markets.
  - MWG: 10A-10C.
12. November 4<sup>th</sup> – 6<sup>th</sup>.
- Competitive Markets.
  - MWG: 10D-10G.
13. November 11<sup>th</sup> – 13<sup>th</sup>:
- Externalities and Public Goods.
  - MWG: 11, and additional readings.
14. November 18<sup>th</sup> – 20<sup>th</sup>. **Second Midterm Exam.**
- Monopoly and Price discrimination.

- MWG: 12B (only monopoly), and additional readings.
15. November 25<sup>th</sup> – 29<sup>th</sup>.
- No class: Thanksgiving break.
16. December 2<sup>nd</sup> – 4<sup>th</sup>.
- Introduction to Oligopoly and Review.
17. December 9<sup>th</sup> – 11<sup>th</sup>, Final exams' week.
- Final exam: Monday, **December 8<sup>th</sup>, 10:30am-12:30p.m.**

*Disability Resource Accommodation:*

*Reasonable accommodations are available for students who have a documented disability. Please notify the instructor the first week of class of any accommodations needed for the course. Late notification may cause the requested accommodations to not be available. All accommodations must be approved through the Disability Resource Center (DRC) in Administration Annex 205, 335-1566, <http://www.drc.wsu.edu/>*

*Academic Honesty:*

*WAC 504-25-015. Academic dishonesty, such as cheating, plagiarism, fabrication, and fraud, is prohibited. See <http://www.conduct.wsu.edu/default.asp?PageID=343> for more information and specific definitions of academic dishonesty.*

*As an institution of higher education, Washington State University is committed to principles of truth and academic honesty. All members of the University community share the responsibility for maintaining and supporting these principles. When a student enrolls in Washington State University, the student assumes an obligation to pursue academic endeavors in a manner consistent with the standards of academic integrity adopted by the University. To maintain the academic integrity of the community, the University cannot tolerate acts of academic dishonesty including any forms of cheating, plagiarism, or fabrication. Washington State University reserves the right and the power to discipline or to exclude students who engage in academic dishonesty. To that end, the University has established the following rules defining prohibited academic dishonesty and the process followed when such behavior is alleged. These rules incorporate Washington State University's Academic Integrity Policy, the University-wide document establishing policies and procedures to foster academic integrity. This policy is applicable to undergraduate and graduate students alike, as it pertains to dishonesty in course work and related academic pursuits. In cases of dishonesty in research and original scholarship, the University's Policy and Procedural Guidelines for Misconduct in Research and Scholarship may take precedence over the policies and procedures contained herein.*

*Academic dishonesty includes cheating, plagiarism, and fabrication in the process of completing academic work. These standards should be interpreted by students as general notice of prohibited conduct. They should be read broadly, and are not designed to define misconduct in exhaustive forms.*

*Campus Safety Plan:*

*Can be found at <http://safetyplan.wsu.edu> and <http://oem.wsu.edu/emergencies>, contains a comprehensive listing of university policies, statistics and information related to campus safety, emergency management and the health and welfare of the campus community.*

*Lauren's Promise*

*I will listen and believe you if someone is threatening you. Lauren McCluskey, a 21-year-old honors student athlete, was murdered on Oct. 22, 2018, by a man she briefly dated on the University of Utah campus. We must all take actions to ensure that this never happens again.*

- *If you are in immediate danger, call 911.*
- *If you are experiencing sexual assault, domestic violence, and stalking, please report it to me and I will connect you to resources or call Alternatives to Violence of the Palouse at 877-334-2887 (24-hour crisis hotline).*

*Any form of sexual harassment or violence will not be excused or tolerated at Washington State University. WSU has instituted procedures to respond to violations of these laws and standards, programs aimed at the prevention of such conduct, and intervention on behalf of the victims.*

*WSU Police officers will treat victims of sexual assault, domestic violence, and stalking with respect and dignity. Confidentiality is of the utmost importance and WSU Police will assist by providing resources to victims. In addition to its law enforcement efforts regarding sexual assault, domestic violence and stalking, WSU Police refer victims to the appropriate university and/or local community counseling and other resources devoted to assisting victims.*

*Advocates help survivors determine their own needs in regards to their physical and emotional health, reporting options, and academic concerns. They connect survivors to campus and community services, and provide accompaniment to important appointments (court, hospital, and police) and support throughout the process. WSUPD can also connect you with advocacy services, if desired. The local advocacy group is Alternatives to Violence of the Palouse, whose services are free, immediate, and confidential.*

*Other confidential resources include WSU Counseling and Psychological Services. If you would like to speak with a counselor after business hours, WSUPD can contact the on-call counselor and have them call you directly or a crisis telephone number is provided. Information shared with the counselor will not be provided to WSUPD without expressed permission from you.*

*WSU Counseling and Psychological Services 509-335-2159 (crisis services line)*

***Disclaimer: This syllabus is subject to change to facilitate instructional and/or student needs.***