

# ECONS 501 - MICROECONOMIC THEORY-I

## FALL 2022

[http://faculty.ses.wsu.edu/Munoz/Teaching/Teaching\\_EconS501.html](http://faculty.ses.wsu.edu/Munoz/Teaching/Teaching_EconS501.html)

**Instructor:** Felix Munoz-Garcia

**Lectures:** Hulbert Hall 27 (ground floor),  
Mondays and Wednesdays, 9:10-10:25am.

**Office:** Hulbert Hall 103H

**Phone:** 509-335-8402

**E-mail:** [fmunoz@wsu.edu](mailto:fmunoz@wsu.edu)

**Office hours:** Fridays, 9:00-10:00am.,  
and by appointment.

**TA:** Fangyan Wang

**Office hours:**

Tuesdays, 10:30-11:30am, and by appointment.

**Review sessions:** Fridays, 9:30-10:30am.

Hulbert 27 (ground floor).

**Offices:** 107D Hulbert Hall.

**E-mails:** [fangyan.wang@wsu.edu](mailto:fangyan.wang@wsu.edu)

### *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.

### *Required Text:*

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

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

*Recommended Reading (Microeconomics):*

- 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].
- 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):
  - Walter Nicholson and Christopher M. Snyder (NS) *Microeconomic Theory: Basic Principles and Extensions*. Southwestern 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 read the corresponding chapter of the textbook before starting to read MWG.
  - Ana Espinola-Arredondo and Felix Munoz-Garcia, *Intermediate Microeconomic Theory: Tools and Step-by-Step Examples*, MIT Press, 2020.
  - Jeffrey F. Perloff. *Microeconomics: Theory and Applications with Calculus*. Addison-Wesley;

*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 Anthanassios 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):

- Michael Klein. *Mathematical Methods for Economics*. (Any edition) Addison-Wesley.
- 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.

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 Mondays and Wednesdays, 9:10-10:25a.m. Attendance is very important to your success in this class.

*Review Sessions (Practice sessions):*

Your teaching assistant, Fangyan, 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 to solve these exercises. Attendance is strongly recommended, and has proven very useful in previous editions of this course.

Time: Fridays, 9:30-10:30am.

Location: Hulbert 23.

*Class materials:*

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

*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:** Wednesday, October 5<sup>th</sup>.

**Midterm #2:** Wednesday, November 16<sup>th</sup>.

**Final exam:** Wednesday, December 14<sup>th</sup>, 8:00-10:00am.

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.

*Students with Disabilities:*

Reasonable accommodations are available for students with a documented disability. If you have a disability and may need accommodations to fully participate in this class, please visit the Disability Resource Center at <http://www.drc.wsu.edu/>, stop by their office at the Admin Annex Building, Room 205; or call 509-335-3417. All accommodations must be approved through the Disability Resource Center.

*Academic Integrity:*

Academic integrity will be strongly enforced in this course. Any student caught cheating on any assignment will be given an F grade for the course and will be reported to the Office Student Standards and Accountability. Cheating is defined in the Standards for Student Conduct WAC 504-26-010 (3). It is strongly suggested that you read and understand these definitions: <http://conduct.wsu.edu/default.asp?PageID=338>.

*WSU Safety:*

WSU is committed to maintaining a safe environment for its faculty, staff, and students. Safety is the responsibility of every member of the campus community and individuals should know the appropriate actions to take when an emergency arises. In support of our commitment to the safety of the campus community the University has developed a Campus Safety Plan, <http://safetyplan.wsu.edu>. It is highly recommended that you visit this web site as well as the University emergency management web site at <http://oem.wsu.edu/emergencies> to become familiar with the information provided.

**DESCRIPTION OF COURSE REQUIREMENTS**

*Homework:*

Homework assignments will be posted on the course website (almost) every Monday. 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.

1. August 22<sup>nd</sup> and 24<sup>th</sup>.
  - Preference Relations and utility functions.
  - FMG: Chapter 1; MWG: Chapters 1 and 2; JR: Chapters 1.1-1.3; and Rubinstein: Lectures 1 and 3.
2. August 29<sup>th</sup> and 31<sup>st</sup>.
  - Demand Theory.
  - FMG: Chapter 2; MWG: Chapters 3A-3D; JR: 1.3; and Rubinstein: Lectures 2, 4 and 5.
3. September 5<sup>th</sup> and 7<sup>th</sup>. [No class on Monday, September 5<sup>th</sup>, Labor Day.]

- Demand Theory.
  - FMG: Chapter 2; MWG: Chapters 3A-3D; JR: 1.3; and Rubinstein: Lectures 2, 4 and 5.
4. September 12<sup>th</sup> and 14<sup>th</sup>.
    - Demand Theory: Duality.
    - FMG: Chapter 2; MWG: 3E-3G; JR: 1.4, 1.5, and 2.1; Rubinstein: Lecture 6
  5. September 19<sup>th</sup> and 21<sup>st</sup>.
    - Demand Theory: Measuring welfare changes.
    - FMG: Chapter 3; MWG: 3I.
  6. September 26<sup>th</sup> and 28<sup>th</sup>.
    - Aggregate Demand.
    - FMG: Chapter 3.8; MWG: 4A-4C.
  7. October 3<sup>rd</sup> and October 5<sup>th</sup>. **First Midterm Exam, October 5<sup>th</sup> (Wednesday).**
    - Production.
    - FMG: Chapter 4; MWG: 5A-5C; JR: 3.2.
  8. October 10<sup>th</sup> and 12<sup>th</sup>.
    - Production and Costs.
    - FMG: Chapter 4; MWG: 5D-5G; JR: 3.3-3.5; and Rubinstein: Lecture 7.
  9. October 17<sup>th</sup> and 19<sup>th</sup>.
    - Choice under uncertainty.
    - FMG: Chapter 5; and MWG: 6A-6B.
  10. October 24<sup>th</sup> and 26<sup>th</sup>.
    - Choice under uncertainty.
    - FMG: Chapter 5; MWG: 6C-6E.
  11. October 31<sup>st</sup> and November 2<sup>nd</sup>.
    - Competitive Markets.
    - MWG: 10A-10C.
  12. November 7<sup>th</sup> and 9<sup>th</sup>.
    - Competitive Markets.
    - FMG: Chapter 6.1-6.3; and MWG: 10D-10G.
  13. November 14<sup>th</sup> and 16<sup>th</sup>: **Second Midterm Exam, November 16<sup>th</sup> (Wednesday).**
    - Externalities and Public Goods.

- FMG: Chapter 9; and MWG: 11.
14. November 21<sup>st</sup> and 25<sup>th</sup>.
- No class: Thanksgiving break.
15. November 28<sup>th</sup> and 30<sup>th</sup>.
- Monopoly and Price discrimination.
  - FMG: Chapter 7; and MWG: 12B.
16. December 5<sup>th</sup> and 7<sup>th</sup>.
- Monopoly and Price discrimination.
  - FMG: Chapter 7; and MWG: 12B.
17. December 12<sup>th</sup> and 14<sup>th</sup>, Final exams' week.
- Final exam: Wednesday, December 14<sup>th</sup>, 8:00-10:00am.