

INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO

Department of Economics

Course: Advanced Microeconomics II.
(Microeconomía Avanzada II., ECO-11122-001)

Professor: Radovan Vadovic

Time: Monday and Wednesday at 17:30-19:00 for 001

Place: Campus Rio Hondo, Room: B-2

Office hours: Monday and Wednesday at 12:00-13:30

Place: Campus Santa Teresa, 3rd floor.

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Class website: <http://allman.rhon.itam.mx/~rvadovic/teach.html>

This is the second part of a two-semester sequence of microeconomic theory for students specializing in political economy and/or financial economics. The principal object of study in this course is the behavior of rational economic agents (individuals and firms), in strategic situations. The material of this class will form the basis for further study of microeconomics, as well as for understanding modern foundations of other branches of economic analysis

The formal subject matter of this course is similar to that of the Intermediate Microeconomics classes you may have taken in the past. This class, however, will provide a more in-depth presentation of the material. While we are not going to get too deeply into formal side of the subject matter, a major goal of this class is to equip you with the tools of game theory and make you comfortable using them. We also introduce some topics and methods that only recently appeared in the economic science which should give you a little exposure to the frontiers of research. At some points this class may seem a bit technical but it is essential, that students try to see the economic intuition behind the, sometimes, somewhat mathematical language.

The formal mathematical prerequisites for the class are limited to the standard topics in calculus and probability, which should be familiar to most of the students. If, on occasion, additional material is needed it will be fully developed in class.

TEXTBOOKS:

The Main Text: Robert Gibbons, *Game Theory for Applied Economists*, 1992, Princeton University Press

Alternative Reference Books: Geoffrey Jehle and Phill Reny, *Advanced Microeconomic*

Theory, 2001, 2nd edition, Addison Wesley

Math Reference Book: Alpha Chiang, *Fundamental Methods for Mathematical Economics*, 3rd edition, McGraw Hill, Inc., 1984

Important: Lecture notes (that you take in class) play a major role in this course. This means that coming to class, paying attention and taking notes is very important.

The “main” textbook for this class is *Game Theory for Applied Economists* by Robert Gibbons. This is a standard, clear and self-contained book that I strongly suggest you get for your own reference. My lectures will loosely follow this book.

Homeworks will be assigned from this book. Therefore, you should master the material that the book covers.

EXERCISES AND HOMEWORKS:

You will find that proper understanding of the material of this class is impossible without solving exercises. Homeworks will be assigned three weeks before each exam and posted online for downloading (on the class website). I will ask you to turn in the worked out solutions on the day of the exam. Homeworks may be graded. You are encouraged to consult me about any problems you may have while working on them. Homework solutions will be posted online one week before the corresponding exam. Additional exercises can be found after every chapter of the textbook.

EXPERIMENTS:

In this class I will occasionally run an economic experiment. An experiment is a tool that helps us understand human decision-making and evaluate economic theories. For our purposes there are some experiments that are easily run in the class and can demonstrate some of the concepts that we will be learning about. Depending on your performance you will earn points. How you can earn these points will depend on the rules of individual experiment, decisions you make and sometimes also the chance. I will keep track of all points you earn.

At the end of the semester I will reward 5 students who accumulated the most points during the semester by adding 2% to their final class score.

EXAMS AND GRADING:

There will be three equal examinations in this class, each covering a third of the course. No make-up opportunities will be provided, unless an extremely valid medical or other reason can be documented. The final grade will be determined as follows:

<u>Grading Policy:</u>	<u>Weight:</u>
Exam 1:	45%
Exam 2:	45%
Homeworks and Experiments:	10%

Exams are not cumulative and you will have 1.5 hours for each exam. I do not require nor record your attendance. However, I have a way to keep at least some record of attendance. For every item that you hand in to me (such as the homework solutions or a decision sheet for an experiment) I will give you a point. At the end of the semester I will divide the number of points you've earned by the number of possible points. This will count for the 10% of your final grade.

The grading scale for the final grade is as follows:

97% and up	10
90% – 96%	9
80% – 89%	8
70% – 79%	7
60% – 69%	6
less than 60%	5

I sometimes curve the exams when I think it's appropriate. This is done by lowering the base score relative to which your test grade is computed. Notice that because of this it may happen that a few people earn more than 100% on the test.

OFFICE HOURS:

Besides the scheduled office hours, students are encouraged to schedule appointments to discuss any matters relevant to the class. I can always be reached by e-mail and will respond as soon as possible.

LANGUGE AND OTHER MATTERS:

The language of instruction in this class is English. I realize that this may be causing occasional difficulties and would like to apologize for this in advance. If you do not understand anything I say or write in class or in a private discussion after class and during the office hours, feel free to interrupt at any time and ask for clarification. I would also appreciate any comments on the material and style of the class that you can make.

APPROXIMATE OUTLINE OF THE COURSE:

Part I. Games with Complete Information:

1. Static Games
2. Dynamic Games
3. Repeated Games

Part II. Games with Incomplete Information:

1. Bayesian Static Games
2. Bayesian Dynamic Games

And if time allows:

Part III. Topics and Applications :

1. Information Economics: Adverse Selection and Moral Hazard
2. Psychological Games
3. Elements of General Equilibrium