Microeconomic Theory II
BPHD 8110-001, Spring 2023

Class meeting time and place: 9:30am-12:15pm R, Friday 207
Instructor: Artie Zillante
Office location and phone: 211B Friday, (704) 687-7589
Office hours: 1pm-2pm R and by appointment
E-mail: azillant@uncc.edu
Web-site: http://www.belkcollegeofbusiness.uncc.edu/azillant

Course Description & Objectives

Study of game theory, its applications in microeconomic theory and finance, and topics on market equilibrium and market failure. The topics cover simultaneous-move games, dynamic games, analysis of competitive markets, market power, adverse selection, and the principal-agent problem.

This is a second semester course in Microeconomic Theory for the Business Administration PhD. As such, it will be a rigorous course which will introduce the student to the basic principles of analyzing strategic games. By the end of the course, students should be familiar with the fundamental concepts of game theory as they are used in the finance discipline and be able to use them in building their own theoretical models.

Books and Materials

Required:

Mas-Colell, Whinston, and Green (MWG). *Microeconomic Theory*. Oxford University Press, 1995.

Supplemental texts and articles may be mentioned throughout the semester.

Web-site

The course web site is http://www.belkcollegeofbusiness.uncc.edu/azillant. From this site you may obtain a copy of the course syllabus, a course calendar, lecture outlines, and problem sets. Other materials may be added during the semester.

Grading

Grades for the course will be based on four assignments, two exams, and a research paper. The four assignments will count for a total of 10% of the final grade. The two exams each count for 30% of the final grade and 30% of the final grade is the research project. More information on the research project will be provided on a separate form.

Attendance

Attendance is not required, but given the rigorous nature of the course it is suggested that students attend all lectures.

Tentative Course Outline

Simultaneous games of complete information
- Nash equilibrium, pure strategies, mixed strategy Nash equilibrium

Sequential games of incomplete information
- Subgame perfect Nash equilibrium, finitely and infinitely repeated games

Games of complete information with a continuum of strategies
- Cournot and Bertrand games

Simultaneous games of incomplete information
- Bayes-Nash equilibria, auctions

Sequential games of incomplete information
- Perfect Bayesian equilibria, separating and pooling equilibria

Topics (tentative)
- Mechanism design
- Principal-agent problems
- Nash bargaining
- Cutoff strategies
- Markov perfect equilibria
- Others as needed

College and classroom policies

All students are required to read and abide by the Code of Student Academic Integrity. Violations of the Code of Student Academic Integrity, including plagiarism, will result in disciplinary action as provided in the Code. Definitions and examples of plagiarism are set forth in the Code. The Code is available from the Dean of Students Office or online at https://legal.uncc.edu/policies/up-407

The Belk College of Business strives to create an inclusive academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.

UNC Charlotte is committed to access to education. If you have a disability and need academic accommodations, please provide a letter of accommodation from Disability Services early in the semester. For more information on accommodations, contact the Office of Disability Services at 704-687-0040 or visit their office in Fretwell 230.

Polices related to health and campus safety: This course will adhere to the University guidelines in place for class meetings throughout the semester. There is more information about the University guidelines here: https://ninernationcares.charlotte.edu/.

Important dates (may need to be adjusted due to weather or other events):

January 26: Assignment 1 due
February 9: Assignment 2 due
February 16: Test 1
Week of February 23: Individual meetings to discuss projects
March 2: **No class meeting – Spring Recess**
March 23: Assignment 3 due
April 13: Assignment 4 due
April 20: Test 2
Week of April 27: Individual meetings to discuss projects
Final exam period (likely either May 4 or May 11): Research projects due

Other texts I may reference:

Fudenberg and Tirole (1992). Game Theory. MIT Press.
Gibbons (1992). Game Theory for Applied Economists. Princeton University Press.
Hal Varian: How to Build an Economic Model in your Spare Time.