ECO 7116: Microeconomic Theory 2 Syllabus

(Spring 2025)

Instructor: Dr. Richard Romano

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Office Hours: Tuesday, 2:00-4:00pm (Matherly 203)

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Class Location: Matherly Hall 118

Class Meeting Time: Tuesday and Thursday, 3rd and 4th periods

Course Prerequisites: ECO 7115 (Microeconomic Theory 1)

Course Textbook (required): Microeconomic Theory, A. Mas-Colell, M.D. Whinston, and J. Green,

1995 Oxford University Press

Course Description: This is a required course for first-year Ph.D. students in economics. We study game theory, monopoly, oligopoly, and topics in information economics. We develop theoretical tools useful in analyzing situations of imperfect competition and apply them to these settings. Part of the focus is on market failure. The course is theoretical and mathematically rigorous.

Course Objectives: Students that successfully complete this course will be able to:

- (i) understand and apply the fundamental principles of game theory;
- (ii) understand how a monopolist makes choices and the economic efficiency implications;
- (iii) understand oligopoly equilibrium and how it relates to the economic environment and implications for economic efficiency;
- (iv) understand effects on competitive-market, oligopoly, and monopoly decisions of various types of imperfect information decision makers (consumers and firms) may confront.

Class Modality: This is a fully in-person course. Lectures will not be streamed nor recorded. See below regarding exams and grading.

Exams and Grading: Your course grade will be based on your performance on two take-home exams (each 30%) and an in-class final exam (40% of course grade). My planned dates for providing the take-home exams are Feb. 13 and March 27. In each case of these, you will have approximately 24 hours to complete the exams and provide your answers to me. These will require your own *individual* work, without any use of generative AI, though otherwise open book. See below for more on cheating-related issues. The in-class final exam will have 50% coverage from the material covered after the second take-home, and the rest from earlier material. At the time I write this, I do not yet know the exact time/place of the final exam, but let's plan on April 25 and we can discuss time (we can move to weekend if we prefer).

Grading Scale: Here are ranges for grades using the weighted average of your scores: 90 - A; 85-89.99 - A; 80-84.99 - B+; 75-79.99 - B; 70 - 74.99 - B-; 65-69.99 - C+; 60-64-99 - C; < 60 - C-.

Problems: I will in class regularly provide problems to help you learn the material. You can work together on these and use whatever resources you want, but the onus is on you to learn the material.

Tentative Topics Schedule and Reading¹

<u>Topic 1</u>: Game Theory Basics 3½ classes

Reading:² C7 and pp. 217-218.

<u>Topic 2</u>: Simultaneous-Move Games 5½ classes

Reading: C8 but omit C8.F and the appendix.

Topic 3: Dynamic Games 3 classes

Reading: C9A, C9B

Topic 4: Market Power (Monopoly & Oligopoly) 7 classes

Reading: C12A, C12B, C12C (omitting pp. 399-400), C12D, C12E³

<u>Topic 5</u>: Adverse Selection, Signaling, and Screening 6 classes

Reading: C13A, C13B up to p. 443 ('A Game Theoretic Approach), C13C up to p. 458 ('Second-

Best Market Intervention'), 13D up to small print on p. 466.

<u>Topic 6</u>: The Principal-Agent Problem 3 classes

Reading: In C14, specifics TBA.⁴

Professionalism and Honor Code: Students are bound to not cheat or plagiarize, and are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: 'On my honor, I have neither given nor received unauthorized aid in doing this assignment.'"

You should familiarize yourself with the <u>UF Student Honor Code</u>. Cheating and plagiarism are not the only violations of this policy. Making false or misleading statements to procure an improper academic advantage, failing to properly cite quotations, and unauthorized collaboration or consultation of resources are also violations. Importantly, ignorance of a policy is not a valid reason for violating it.

Generative Artificial Intelligence: The Department of Economics faculty assume that all work that is submitted for grading is written by the student whose name it bears, and that it represents their ideas and work. Accordingly, students are not permitted to use generative AI when completing assignments,

¹ The "tentative" regards the number of expected classes devoted to each topic. This is the first time I am teaching this class, and it is difficult to predict the exact time needed. I will keep you informed of where we are as the class unfolds. In the unlikely case that we have extra time, we will decide what else to cover, potentially 'Externalities and Public Goods,' discussed in Chapter 11 of the textbook.

² All reading is in the Mas-Colell et.al. textbook, "CXY' refers to Chapter X, section Y.

³ Time permitting, I will present an alternative (I think clearer) model of the 'Competitive Limit," a topic covered in C12F, which I have then not assigned.

⁴ The specific coverage will depend on how much time we have for this topic.

quizzes, exams, or other graded work unless their instructor has expressly granted that permission. Unauthorized use of generative AI constitutes cheating and/or plagiarism. Such violations of the UF Student Honor Code will be reported to the UF Dean of Students Office and will be subject to severe sanctions.

Generative AI includes, but is not limited to, ChatGPT, DALL-E, and Google Bard.

Students Requiring Accommodations: Students with disabilities requesting accommodations should first register with the Disabilities Resource Center (392-8565; https://disability.ufl.edu/), providing appropriate documentation. Once registered, students will receive an accommodation letter that can be presented to the instructor when requesting accommodations. Please register at the beginning of the course if seeking accommodations.

Course Evaluation: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <a href="https://doi.org/10.1007/nc.1007

Health Counseling and Emergencies:

U Matter, We Care:

If you or a friend is in distress, please contact <u>umatter@ufl.edu</u> or 352 392-1575 so that a team member can reach out to the student.

Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS)Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or http://www.police.ufl.edu/.