

EC 320, Fall 2025

Game Theory: Strategies, decisions, and communication

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MoWe, 2:00–3:45 PM. Ansin Building, 111

If game theory does make a further substantial contribution, then we believe that it is a negative one. The contribution comes through demonstrating the limits of a particular form of individualism in social science: one based exclusively on the model of persons as preference satisfiers.

—S. Heap & Y. Varoufakis, 1995.

COURSE DESCRIPTION

Game Theory is the science of rational behavior in interactive situations. Students explore how individuals think strategically, make decisions, and communicate their choices in diverse economic, political, and social environments. This course outlines different applications of Game Theory, including simultaneous and sequential games, voting behavior, communication strategies, cost-benefit analyses, bargaining processes, online dating, and Nash equilibrium concepts.

This course supports the [Economics minor](#) and is included in the [Business of Creative Enterprises major](#). In this spirit, emphasis will be given to developing instructor's and students' *critical thinking*, use of *empirical evidence*, stimulating *creative writing*, and assessing learning through *diverse formats*.

Finally, this course is also part of the College's Social/Psychological Perspective. Learning economics provides a deeper view of *human behavior*, and how the latter influences *individual, collective, and institutional decision-making*.

STUDENT LEARNING OUTCOMES

Succeeding in this course does not require special talents. Curiosity and passion for learning new content are sufficient conditions. Our world and lives revolve around economic issues, and this course offers a historical overview of what economists have to say about society's economic doctrines.

At the completion of the course, students will be able to:

1. Recognize common forms and types of strategic games;
2. Understand the role of information, communication, and beliefs in strategic settings;
3. Use game-theoretic tools to improve their approach to real-life situations.

COURSE CONTENT ORGANIZATION

Class meetings will follow a seminar-based teaching method. These will mostly consist of lectures, as well as student-led discussions.

That said, *participation is crucial* in this course. I learn a lot from students, and while many lectures will consist of presenting contents and ideas, your questions, comments, and readings absorption provide a richer experience for all involved in the course.

Lecture notes, readings, and assignments will be posted on Canvas. The course home page contains all modules, with their respective readings and assignments.

In case a student misses a class meeting, it is *their responsibility* to catch up with what they have missed. The best ways to do that are: (i) checking out Canvas, and (ii) talking to other students.

COURSE MATERIALS

We have **one** required textbook:

- A. Dixit, S. Skeath, and D. McAdams. (2020). *Games of Strategy*, 5th edition, W.W. Norton & Company. ISBN-10 0393422194. (Available at the Bookstore and on reserve at the Iwasaki Library.)

Any additional readings will be made available on Canvas.

COMMUNICATION & OFFICE HOURS

While communicating in the *classroom* and by *email*, I prefer to be addressed as Prof. Santetti.

My office hours are on **Tuesdays, 8–11 AM**, via Zoom. In order to be as efficient as possible, students must set up a time slot on the [Calendar booking page](#) so I can give my full attention to their needs. If possible, also include the reason for meeting so I can prepare. A fixed module with the booking page is also available on Canvas.

Outside of classroom/office hours, the *only* means of communicating with Prof. Santetti is by *email*. All educational institutions love sending emails, flooding us with new messages every day. In order to address class concerns more easily, students are asked to put the course name and section (if more than one) in square brackets in the email subject. For example, “[EC 320] Question about class XYZ.”

I reserve the right to *ignore* emails that do not follow the guidelines outlined above.

ATTENDANCE AND LATE POLICIES

- One letter grade deduction if a student misses more than **three (3)** meetings. By missing any additional meetings, you will lose a partial letter grade. If you expect to miss more than three meetings, get in touch with the [Office of Student Success](#).
 - Students requiring special accommodations (with a letter from SAS) regarding class attendance have a higher tolerance of **five (5)** meetings.
- Coming to class late will count as **half** of an absence.

- Late assignment submissions will have a grade deduction of **20%**, increasing by **10** additional percentage points per day.
- If you know you will be submitting an assignment past the due date, you **need not** tell me the reasons for it. Simply be aware of the late submission policy stated above.

ASSIGNMENTS & GRADING

Graded assignments

- **Problem sets** (30%): Each course topic will be accompanied by a list of practice problems. Each list consists of “warm-up” problems, as well as 3–5 “group” problems which students will present their solutions in class. These presentations will have pre-determined dates and will be the only graded portion of these Problem Sets.
- **Midterm exams** (40%): Two midterm examinations will individually assess student learning. Exam questions will be based on Problem Sets and taken in class, with students allowed to use one-page handwritten notes. Dates will be discussed in class.
- **Real-life games** (30%): This group project will help students develop the *art* aspect of Game Theory. By choosing a real-world problem, students will apply their Game Theory knowledge to identify the individuals/groups/institutions involved, point out the source of conflict, and propose strategic solutions to these issues. Further details will be provided in class.

Note 1: Additional activities/projects may be **added** to graded assignments with previous discussion.

Note 2: In case a student misses a class meeting, I will **not** teach them the missed lecture individually and/or via Zoom.

Note 3: In case a student misses an in-class assignment, there will be **no make-ups**.

Letter Grade Distribution

<i>Performance</i>	<i>Letter Grade</i>
Excellent, superior performance	A (93–100%), A- (90–92%)
Good performance	B+ (87–89%), B (83–86%), B- (80–82%)
Standard performance	C+ (77–79%), C (73–76%), C- (70–72%)
Substandard performance	D (60–69%)
Unsatisfactory performance	F (0–59%)

THIS COURSE & USING AI

While using Large Language Models (LLMs) may be helpful in some contexts, I highly recommend *not using* ChatGPT or similar LLMs in this course. Using LLMs and Artificial Intelligence to generate a reflection on course readings or to generate an assignment answer sheet do not help students think through the materials. Students can create text, meet a suggested word count, and finish an assignment using LLMs, but the text will be *meaningless*. There is an official philosophical term for this kind of writing: *bullshit* (Frankfurt 2005; Hicks, Humphries, and Slater 2024). The point of writing is to help crystallize your thinking. Chugging out words that make it look like you read and understood the articles will not help you learn.¹

Using an AI-content generator to complete coursework without proper attribution or authorization is a form of academic dishonesty. If you are unsure about whether something may be plagiarism or academic dishonesty, please contact the instructor to discuss the issue.

Finally, I will not spend time trying to guess if your assignments are AI-generated. Students will be graded based on their own merits. Recent research has shown that students using AI to complete their assignments have worse grades than those not using it.

EXPECTATIONS

You can expect me to:

- Grade and provide feedback on assignments within one week after the due date;
- Reply to emails/messages within 24 hours during the week and within 48 hours on weekends and holidays;
 - *I do not reply to emails on weekends. Use them to relax!*
- Hold weekly office hours, where students can ask every question and talk about any issues/concerns relative to our course;
- Ignore emails/requests asking for any grade alteration by the end of the semester.

¹This section's first two paragraphs were adapted from Andrew Heiss.

I expect students to:

- Come to class on time;
- Respectfully participate in in-class discussions and activities;
- Stay in the classroom during the *entire* lecture—we will take a bathroom/snack break every class;
- Keep phones away throughout the duration of class—computers are welcome, but refrain from using them for anything but activities related to the class;
- Immediately notify me in the event of an emergency that prevents you from following/completing the course.

IMPORTANT DATES

- 09/03: Fall classes start.
- 10/13: **No classes** (Indigenous People's Day).
- 11/11: **No classes** (Veteran's Day).
- 11/26–11/28: **No classes** (Thanksgiving Break).
- 12/16: Last day of Fall classes.

Access the full 2025–2026 Academic Calendar [here](#).

TENTATIVE COURSE OUTLINE

Week 1. Course introduction & logistics. (09/03)

Weeks 2–3. Extensive- and normal-form representations. (09/08, 09/10, 09/15, 09/17)

Weeks 4–5. Beliefs, mixed strategies, and dominance. (09/22, 09/24, 09/09, 10/01)

Weeks 6–7. Nash equilibrium in pure and mixed strategies. (10/06, 10/08, 10/15)

Weeks 8–9. The extensive form revisited and subgame perfection. (10/20, 10/22, 10/27, 10/29)

Weeks 10–11. Repeated games and reputation. (11/03, 11/05, 11/10, 11/12)

Weeks 12–13. Games of incomplete information. (11/17, 11/19, 11/24)

Weeks 14–15. Bayesian perfection and signaling games. (12/01, 12/03, 12/08, 12/10)

IMPORTANT NOTE

This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the course schedule to accommodate our course needs.

INSTITUTIONAL POLICIES AND PROCEDURES

Support for Individuals Impacted by Discrimination, Harassment, or Sexual Violence

If you have been impacted by discrimination, harassment, or sexual violence, the Office of Equal Opportunity (oeo@emerson.edu; 617-824-8999) is available to meet with you and discuss options to address concerns and to provide you with support resources. Your instructor is another resource, but please note that as an Emerson employee, they must share information related to discrimination, harassment, or sexual violence with the Office of Equal Opportunity. If you would like to connect with a confidential resource, please contact the Healing & Advocacy Collective (advocate@emerson.edu, 617-824-8857), the Emerson Wellness Center (emersonwellnesscenter@emerson.edu, 617-824-8666), or the Center for Spiritual Life (spiritual_life@emerson.edu, 617-824-8036).

Support for Students with Disabilities

Emerson is committed to providing equal access and support to students with disabilities, through the provision of reasonable accommodations, to allow them to fully participate in Emerson programs and activities. If you have a disability that may require accommodations, please contact Student Accessibility Services for information about the registration process and/or to schedule an appointment (SAS@emerson.edu; 617-824- 8592).

Students are encouraged to contact SAS early in the semester. Please be aware that accommodations are not applied retroactively.

Plagiarism

It is the responsibility of all Emerson students to know and adhere to the College's policy on plagiarism, which can be found at <https://emerson.edu/policies/plagiarism>. If you have any questions concerning the Emerson plagiarism policy or about documentation of sources in work you produce in this course, speak to your instructor. Additionally, The Working with Research and Avoiding Plagiarism (WRAP) Quiz is available to all students through the [Writing and Academic Resource Center's self-enrollment Canvas course](#). One-on-one consultations are available (<https://emerson.mywconline.com>).

Community, Culture, and Belonging

Among the College's Strategic Plan goals is to "Support a vibrant community culture and experience that fosters creativity, curiosity, belonging, accessibility, and well-being." Diversity of identity, heritage, thought, lived experience, languages, and perspective is valued in our community, and we are committed to cultivating productive learning environments that respect and celebrate our differences. The instructor will make every effort to ensure that an inclusive environment exists for all students.

If you have concerns or general comments about what Emerson can do to increase innovation, curiosity, creativity, or create more inclusive classroom environments, you may share your suggestions with Dr. Tuesda Evans in Academic Affairs. Her email is tuesda.evans@emerson.edu.

If you have any concerns or suggestions for improving how Emerson approaches its culture or community-building efforts as an institution, please do not hesitate to contact the Community, Culture, and Belonging Division. Their email is ccb@emerson.edu.

Class Recording

No one may record any part of this class unless the faculty member has given them express permission to do so. Students who require that a class be recorded due to a disability should work with Student Accessibility Service (SAS) to receive an accommodation for that recording. This class is considered a private environment and it is a setting in which copyrighted materials, creative works and educational records may be displayed. Audio or video recording, photographing, transmitting, or publishing the images of those materials or educational records without expressed consent is strictly prohibited. Any student who records a class without the faculty's permission **without a registered accommodation** will be referred to the Office of Community Standards. Accommodations for recording a class will be honored by your instructor.

BIBLIOGRAPHY

- Frankfurt, Harry G. 2005. *On Bullshit*. Princeton University Press.
- Hicks, Michael Townsen, James Humphries, and Joe Slater. 2024. "ChatGPT Is Bullshit." *Ethics and Information Technology* 26 (2): 38.