

ODA 84100

Behavioral Game Theory and Behavioral Operations Management

Spring 2025

Course Information

Class meetings: Wed 2:00 PM – 5:00 PM in room 9-215.

Instructor: Ruth Beer, Associate Professor of Operations Management, Baruch College Zicklin School of Business

Contact: ruth.beer@baruch.cuny.edu

Office hours: by appointment (send email to coordinate).

Course Description

This course is designed to be a foundational course for operations management and decision analytics doctoral students. It consists of an introduction to behavioral game theory, an introduction to human-subject experimental design and implementation, followed by a module on applications to behavioral operations management (which is the main focus of the course). Previous knowledge of mathematical modeling and optimization methodologies is expected from students enrolling in this class. The course covers foundational topics of behavioral modeling, game theory, human-subject experiments, and data analysis, and their application to multiple business settings, including supply chain management, inventory management, capacity planning, and project management.

Prerequisite: XXX

Learning Objectives

1. Students will know how to formulate behavioral research questions and identify the appropriate methodology for the research question (including theoretical model, experiment, data analysis).
2. Students will know how to formulate behavioral models and design human-subject experiments to test the predictions of the models.
3. Students will be able to derive and interpret experimental results to formulate managerial insights.
4. Students will develop skills to analyze and critique experimental papers in OM and identify interesting research question in the area to potentially introduce to their own research agendas.

Recommended Materials

- Katok, E., Leider, S., & Donohue, K. (Eds.). (2018). *The handbook of behavioral operations*.
- Gibbons, R. S. (1992). *Game theory for applied economists*. Princeton University Press.

Optional:

- Bolton, P., & Dewatripont, M. (2004). *Contract theory*. MIT press.
- Camerer, C. F. (2011). *Behavioral game theory: Experiments in strategic interaction*. Princeton university press.

Deliverables

Class participation and presentations: students are expected to participate in class. Students will also be assigned to present papers to the class on specific dates.

One-page writeups: students will submit a one-page summary of the paper(s) they do not present.

Final Project: final project guidelines will be specified in class.

Grading

50%: Class participation and paper presentations

20%: One-page writeups

30%: Final project

Total: 100%.

Baruch College Grading Scale for Graduate Courses		
A	93 - 100%	Excellent performance
A-	90 - 92.9%	
B+	87.1 - 89.9%	Satisfactory performance
B	83 - 87%	
B-	80 - 82.9%	Less than satisfactory performance
C+	77.1 - 79.9%	
C	73 - 77%	Poor performance
C-	70 - 72.9%	
F		Failure

Tentative Schedule

Date	Meeting	Topic
1/29/25	No class in accordance with Baruch College Academic Calendar	
2/5/25	1	Introduction - Purpose and Principles of Experiments
2/12/25	College Closed	
2/19/25	2	Term Project idea and work plan
2/26/25	3	Games of complete information - Experiments
3/5/25	4	Games of incomplete information Experiments
3/12/25	5	Special Topics in BOM - Guest lecture
3/19/25	6	Inventory and Supply Chain Management
3/26/25	7	Process Design & Transparency/Queueing/Project Management
4/2/25	8	Social Preferences in BOM
4/9/25	9	Term Project Development + Consulting
4/16/25	***Spring Break***	
4/23/25	10	CSR and Sustainability
4/30/25	11	Technology Management/Platforms/Human-Algorithm Connection
5/7/25	12	Term Project Development + Consulting
5/14/25	13	Final Class - Project presentations

Academic Expectations

In the spirit of a collegial academic research environment, when working on coursework, you are allowed and encouraged to work with other students and with the instructor, and to consult textbooks and the literature. However, **all submitted or presented work (whether in paper format, presentation format, or in the form of computer code) must be produced by you and represent your ideas, except where proper attribution is given.**

You are encouraged to incorporate ideas of others in your work. However, these must be cited or attributed.

You must abide by the CUNY Graduate Center Policy on Academic Honesty and the CUNY Policy on Academic Integrity. Any case of academic dishonesty will be dealt with according to the policies of the Graduate Center and CUNY, which state in part: "Any student who has submitted a paper, examination, project, or other academic work in part or in full not his or her own without appropriate attribution is subject to disciplinary charges. Such charges may result in the imposition of a grade of "F" or other penalties and sanctions, including suspension and termination of matriculation." You are responsible for obtaining, reading, and understanding these policies.

APPENDIX: Doctoral Program Learning Goals

Goal 1: Comprehensive and Intensive Disciplinary Knowledge

Students who earn a doctorate degree in business will be able to demonstrate a comprehensive and intensive knowledge of the theories, concepts, frameworks, empirical findings, and controversies in a chosen business discipline.

Goal 2: Comprehensive and Intensive Knowledge of Research Methods

Students who earn a doctorate degree in business will be able to demonstrate a comprehensive and intensive knowledge of the research methods and analytical techniques applicable to a chosen business discipline.

Goal 3: Communication of Disciplinary Research

Students who earn a doctorate degree in business will be able to design, conduct, and communicate – in both written and oral formats – original research that makes a substantial contribution to a selected business discipline.

Goal 4: Evaluations of Disciplinary Research

Students who earn a doctorate degree in business will be able to evaluate research ideas and completed research projects critically, assessing their conceptual and methodological soundness and importance of contribution to existing knowledge in the field.

Goal 5: Teaching

Students who earn a doctorate degree in business will be able to teach effectively in a selected discipline at the university level.