

Competition Policy and Game Theory

Cross Elective – Spring 2026

Course Information

Course Duration: 14 weeks

Credit Hours: 4.5

Meetings: **TBD**

Location: **TBD**

Prerequisites: Intermediate Microeconomics, Introduction to Game Theory, and knowledge of Differential Calculus. Students must be familiar with solution concepts related to Static and Dynamic Games of Complete Information.

Equivalent Courses: Economics of Antitrust Regulation, Game theory and Markets, Industrial Organization

Exclusive Courses: Game theory, Microeconomics-I, Competition Law and Policy

Instructor Information

Instructor: Shivangi Chandel

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1. Course Description

This course provides a rigorous study of markets using game-theoretic analysis and examines implications for competition policy. The course progresses from understanding how markets work to evaluating what ought to be done to ensure competitive, efficient outcomes. Students first explore the concept of market power, its sources, and how firms wield it. Second, they examine how collusive behaviour, predatory pricing, certain mergers, and exclusionary practices including abuse of dominant position or monopolization, can harm competition and reduce social welfare. Key theoretical models that inform competition policy are integrated with industry-specific case studies and antitrust court decisions across different jurisdictions.

2. Course Intended Learning Objectives

Course Intended Learning Outcomes	Teaching and Learning Activities	Assessments/Activities
On successful completion of the course, the student will be able to: <ul style="list-style-type: none">-develop a comprehensive understanding of various market structures (perfect competition, monopoly, oligopoly) and how firms interact within these markets.	Lectures: These are planned as interactive sessions run with the assistance of beamer slides. The lectures introduce students to the theoretical concepts from the theory of industrial organization and include problem-solving, application-oriented discussions at the end of each topic.	Homework (Not graded) after completing each topic: Assessing conceptual knowledge and clarity on the theory of Industrial Organization
-evaluate firm strategies such as pricing, mergers, and entry/exit decisions using industrial organization theory.	Case Studies: Examination of firm pricing, mergers, and strategies. Impact of antitrust regulations on competition.	Mid-term Exam: Test theoretical as well as applied knowledge of the Syllabus
-understand the role of competition policy and antitrust regulations in promoting market efficiency and preventing anti-competitive practices.	Office Hours: Instructor office hours of 90 minutes are assigned every week for students to clarify doubts and verify solutions to practice problems	Group Project: Analysis of industry and competition policies and Presentation
-apply theoretical models introduced in lectures to real-world cases, analyzing firm behavior and	Group Projects: Apply models to real-world case studies and present findings.	Final Exam: Comprehensive assessment of models and case study applications.

competition policy using case studies and antitrust rulings.		
-identify and assess anti-competitive behaviors such as collusion, predatory pricing, and monopolization, and understand how they can be mitigated through policy.		<p>Class Participation: Engage in discussions on anti-competitive practices and policy.</p>

3. Scheme of Evaluation and Grading

Evaluation breakup:

The grades in this course will be based on:

Internal Assessment

(70 %):

- GROUP PROJECT (45 %): *Students will work in teams of 2-3 to write a research paper on a course-related topic of their choosing. The research paper, limited to 4000-5000 words, should include an introduction with a clear research question, a literature review, analysis using theoretical or empirical models, and a conclusion with key findings. Each group will also give a 15-minute presentation, supported by slides, to summarize their research. A team charter outlining the responsibilities of each member is required at the beginning of the project, and after submission, peer assessments will be conducted to ensure fair contribution, impacting individual grades. Details regarding deliverables and assessment criteria shared in separate documents.*
- MIDTERM EXAMINATION (25 %): *The midsemester examination would be an in-class, closed book examination of 90 minutes. It will most likely be scheduled during class hours between April 1st – 15th, 2025. Exact date will be announced in March.*

External Assessment

(30 %):

This is an individual assessment in the form of a final examination of 90 minutes following the university norms on mode and duration of the examination. Dates TBA by the university examination office.

Grade Definition:

The course follows the grading scheme set by the university across all schools and courses. To pass a course, the student is required to obtain a minimum of 40% marks in internal and end-term component cumulatively **AND** a minimum of 30% marks in the end-semester component. The existing grading structure for JGU/JSGP is as follows:

Percentage of marks	Grade
80 and above	O
75-79.75	A+
70-74.75	A
65-69.75	A-
60-64.75	B+
55-59.75	B
50-54.75	B-
45-49.75	P1
40-44.75	P2
Below 40	Fail
Incomplete	I
Pass	P
Pass	P#

4. Academic Integrity

Academic Honesty, Cheating, and Plagiarism:

Students are expected to adhere to the highest standards of honesty and integrity during the examinations process. There is a no-tolerance-no-lenency policy towards students using unfair means in class/ exams/ quizzes. For take-home internal assessments, students may work out the problems in groups but they must write out and submit the solutions individually (i.e. no group submissions). It is fairly apparent when solutions are blatantly copied from one another or from the internet. On account of free-riding/plagiarism/unfair-collusion being discovered, the scores will be downscaled as per the penalty norms set under the university's anti-plagiarism policy. For external assessments, the university policy towards use of unfair means shall apply wherein the Unfair Means Committee (UMC) has the mandate to impose penalty for the end-term/external component, including awarding Fail grade to the student found guilty of contravention of Section 29 of the First Ordinance of O.P. Jindal Global University.

Participation/Attendance Policy:

Students are expected to attend all lectures and participate in the interactive sessions. As per the university norms, if a student fails to maintain their attendance more than or equal to 75%, they shall be debarred from writing the end-term examination in this course, leading to receiving Fail grade in the course.

If a student misses the midterm exam due to legitimate reasons, such as illness or a family emergency, they must inform the instructor as soon as possible and provide valid documentation

to support their absence. If the reason is deemed valid, the student will be allowed to take a make-up exam, which may differ in format but will cover the same material. If a make-up cannot be arranged, the weight of the midterm may be transferred to other assessments. **Unexcused absences will result in a "zero" for the midterm without the option of a make-up.**

For the group project, each member is expected to contribute actively by engaging in discussions, completing assigned tasks, and supporting their peers. If a group project is not submitted by the deadline, the entire group will receive a zero unless there are extenuating circumstances, such as documented emergencies that prevented timely submission. In such cases, the group must communicate with the instructor as soon as possible to discuss potential options. Individual contributions will be assessed through peer evaluations, and those who do not participate adequately may receive reduced credit or face penalties in their final grade.

Use of phone/ texting/ laptop:

Students may use their laptops to access reading material during lecture hours. Use of phone to text/call during lectures is strongly discouraged. If there is an urgent call and the student must receive it, they must receive it outside the lecture room, with the instructor's permission.

For mid-semester examination, students are required to place bags, laptops, mobile phones, smartwatches, or any other electronic devices, and reading or reference material of any kind (without being instructed in the question paper) at the front of the examination hall prior to the commencement of the exam. Possession of such materials would be deemed Use of Unfair Means and the course instructor has the mandate to impose penalty on the student, including awarding zero to the student. For end-semester examination, possession of laptops, mobile phones, smartwatches, or any other electronic devices, and reading or reference material of any kind (without being instructed in the question paper) would be considered Use of Unfair Means and UMC has the mandate to impose penalty for the end-term/external component, including awarding Fail grade to the student found guilty of contravention of Section 29 of the First Ordinance of O.P. Jindal Global University.

5. Breakdown of the Syllabus

Module I: Market Structures and Market Power

- a) Perfect Competition and Monopoly
- b) Basic Oligopoly Models – Cournot, Bertrand, Stackelberg
- c) Price Discrimination
- d) Product Differentiation
- e) Concentration and market power

Module II: Cartels and tacit collusion

- a) Formation and Stability of Cartels
- b) Tacit Collusion
- c) Detecting and Fighting Collusion- Antitrust policy
- d) Case I: Cement cartel vs. Competition Commission of India

Module III: Contractual Relations Between firms

- a) Profitability and welfare analysis of simple, horizontal, Cournot mergers
- b) Pro-competitive vertical integration
- c) Anticompetitive effects of vertical mergers
- d) Case II: Kodak

Module IV: Strategic Incumbents and Entry

- a) Entry deterrence and accommodation
- b) Exclusionary practices: Refusal to deal agreements, Predatory pricing, Pay-to-delay-entry schemes, Bundling
- c) Case III: Microsoft

Module V: Regulations in the New Economy

- a) What do we understand by the New Economy?
- b) Antitrust issues in the New Economy
- c) Monopolization practices and Big Data
- d) Case IV: Google

6. Course Material

Textbooks:

1. [BP] Belleflamme, P., and Peitz, M. (2015). *Industrial Organization: Markets and Strategies* (2nd ed.). Cambridge: Cambridge University Press.
2. [Tir]Tirole Jean (1988). *The Theory of Industrial Organization* (1st ed.). The MIT Press.
3. [Cab]Cabral Luis M.B. (2000). *Introduction to Industrial Organization* (1st ed). The MIT Press.
4. [PC]Perloff Jeffrey M. and Dennis W. Carlton (2015). *Modern Industrial Organization* (4th ed.). Pearson.
5. [VH]W. Viscusi, J. Vernon, and J. Harrington (2018). *Economics of Regulation and Antitrust*. The MIT Press.

Journal Articles:

1. *Joskow, Paul L., Transaction Cost Economics, Antitrust Rules and Remedies. Journal of Law, Economics, and Organization, Vol. 18, No. 1, pp. 95-116, 2002, Available at SSRN: <https://ssrn.com/abstract=291796>*
2. *Andrew Schaengold (Sep 19, 2022) A New Approach to FTC Antitrust Regulation <https://www.thereview.org/2021/09/16/schaengold-new-approach-ftc-antitrust-regulation/>*
3. *"Vernon Smith, Economic Experiments, and the Visible Hand"*, by Don Coursey. October 28, 2002.
4. *Smith, V. (1991). Experimental Economics at Purdue. In Papers in Experimental Economics (pp. 154-158). Cambridge: Cambridge University Press.*
doi:10.1017/CBO9780511528354.011

There is a lot of material that must be covered in a short span of three months. Regular homework (expect it at the end of every class) in the form of assigned reading and problems will be given at the end of every lecture. As a rule of thumb, students must keep in mind that for every 3 hours of time in classrooms, they are required to allocate 6 hours of time for self-study.

7. Session Plan

Lecture	Topic	Reference Chapters	Approach/Pedagogy
1st	Revisit Perfect Competition and Monopoly	BP- Chapter 2.2	Problem-solving/Flipped Classroom
2nd -3rd	Revisit Cournot, Bertrand, Stackelberg Oligopoly models	BP- Chapter 3,4	Problem-solving/Flipped Classroom
4th -5th	Pricing strategies – group pricing, menu pricing, bundling	BP- Chapter 8,9,11	Lecture-based/ Problem-solving
6th	Source of market power – product differentiation	BP- Chapter 5.1-5.3	Lecture-based/ Problem-solving
7th – 8th	Non-pricing strategies - advertising	BP- Chapter 6	Lecture-based/ Problem-solving
9th	Measures of concentration and market power, Lerner Herfindahl Index	BP- Chapter 2.3	Lecture-based/ Problem-solving
10th-11th	Cartel formation and stability	BP- Chapter 14	Lecture-based/ Problem-solving
12th	Tacit Collusion	BP- Chapter 14	Lecture-based/ Problem-solving
13-14th	Competition Law and Cartels - theory and examples / Case I – Lysine Cartel	BP- Chapter 14	Lecture-based/Flipped Classroom
15th	Profitability of simple, horizontal, Cournot mergers	BP- Chapter 15.1	Lecture-based/ Problem-solving

16th	Welfare analysis of simple, horizontal, Cournot mergers	BP- Chapter 15.2	Lecture-based/ Problem-solving
17th	Pro-competitive Vertical mergers	PC- Chapter 12 BP- Chapter 17	Lecture-based/ Problem-solving
18th	Anti-competitive vertical mergers	PC- Chapter 12 BP- Chapter 17	Lecture-based/ Problem-solving
19th	Kodak case II – transaction costs perspective	Joskow(2002)	Case-based learning/ Class discussions
20th	Entry deterrence and accommodation	BP- Chapter 16.1	Lecture-based/Problem-solving
21st-22nd	Exclusionary practices: Refusal to deal agreements, Predatory pricing, Pay-to-delay-entry schemes, Bundling	BP- Chapter 16.2 – 16.4	Lecture-based/Problem-solving
23rd	Case III: Microsoft Windows-IE Bundling	TBA	Case-based learning/ Class discussions
24th	Anti-trust issues in the New Economy	VH- Chapter 9	Lecture-based/Flipped Classroom
25th	Monopolization and Big Data	VH- Chapter 9	Lecture-based/Flipped Classroom
26th	Case IV: Google Search Engine	VH- Chapter 9	Case-based learning/ Class discussions
27-30th	Project Presentations + Revision period		