

# Competitive Analysis

## (ECON-UB.0015.01.SP17)

### ■ Course meetings

Monday and Wednesday, 9:30am to 10:45am, Room T-UC21.

### ■ Office Hours

Monday, 11:00-12:00 or by appointment in KMC 7.72.

### ■ Course description

This course takes a formal approach to analyzing the way firms make production and sales decisions and interact strategically with each other in the marketplace. We begin with a study of optimal pricing policies, including versioning, bundling, and related market segmentation strategies. In the second part of the course, we apply game theory to the study of oligopoly interaction, focusing on pricing and output strategies in a dynamic setting. Finally, we analyze strategies for firm dominance, especially through the deterrence of potential competition. The list of such strategies includes capacity expansion, product proliferation, and exclusive dealing contracts.

The main goal of the course is to develop the basic intuition for pricing and other forms of strategic behavior on the part of firms, both when faced with complex patterns of consumer demand and when faced with strategic competitors.

Readings in the textbook will provide background and introduction to a variety of topics, many of which will be covered in class in greater depth. Problem sets will focus on formal analysis. Occasional supplemental readings will provide additional motivation and opportunities to develop intuition.

### ■ Target audience

The course is primarily targeted at junior and senior students. It will provide valuable knowledge and analysis tools for students wishing to pursue a variety of careers, including:

- Consulting. Following the lead of McKinsey, applied game theory has become a central component of the strategy consultant's basic toolkit. Game theory helps a firm (and a consultant) understand that a firm's results depend not only on its decisions but also on its competitors' decisions.
- Marketing. Pricing is a complex, multidimensional task. The tools developed in the course will help design revenue enhancing strategies.
- Law and economics. Antitrust litigation is largely based on the economic analysis of the relevant industry. The course will cover both general principles and specific cases of antitrust and competition policy, both in the U.S. and in Europe.

### ■ Course pre-requisites

Students are required to have taken a semester of microeconomics, specifically the knowledge of competitive markets and game theory will be assumed. Students are also expected to be comfortable with basic algebra and calculus, including systems of equations, derivatives, logarithms and NPV calculations.

### ■ Course outline

The topics developed in the course include: Supply and basic pricing; Price discrimination by indicators and by self-selection; Static and dynamic oligopoly competition (tacit collusion and cartels); Strategic behavior, entry and exit: entry deterrence, predatory pricing, mergers; Vertical relationships. A detailed course outline will be distributed.

### ■ Required course materials

Required Text: The Antitrust Revolution: Economics, competition and policy, 6th edition. J Kwoka and L White. 2014. Oxford University Press

Online Text: Introduction to Industrial Organization, Luís Cabral. 2nd Edition (draft: August 2016)

### ■ Exams and grading

At NYU Stern, we strive to create courses that challenge students intellectually and that meet the Stern standards of academic excellence. To ensure fairness and clarity of grading, the Stern faculty have agreed that for elective courses the individual instructor or department is responsible for determining reasonable grading guidelines.

I have elected to use the following grading guidelines for this course: There will be two tests, given in class, each covering approximately one half of the course material. There will also be problem sets assigned throughout the semester. Please note that there are no make-up exams in this course: students are responsible for checking the test dates and avoid any conflict with other commitments. During the tests, you are not allowed to consult class notes, books, or any other material — or any of your colleagues.

Grading will be based on the two tests (40% each or 30% and 50% respectively if you perform better on the second exam) as well as homeworks (20%). Problem sets will be graded for both completeness and accuracy. One or two random questions will be chosen for grading of accuracy. Questions about grading on exams must be made in writing and no more than a week after the tests are returned. Class participation will serve as a tie breaker for grades near a cutoff.

### ■ Help

I would like each of you to learn and gain as much as you can from this course. I would also encourage collaboration, as students come from varying academic and professional backgrounds. Therefore, for questions regarding class material I strongly encourage use of the class discussion forum. This allows all members of the class to see the questions and answers. I also encourage students to answer questions on this forum. The answers will be moderated by the teaching fellow and myself, and quality answers will be treated the same as quality in-class participation.

For more conceptual questions, I encourage you to use my office hour just after Monday's class (M: 11:00-12:00) in KMC 7.72. If this time does not work for you, feel free to email

me and set up an alternate time. My e-mail (gkubitz@stern.nyu.edu) should be used for mainly administrative purposes.

Additionally, you can get help from our teaching fellow.

All announcements regarding the course will be made on NYU Classes. Besides administrative issues, I may post clarifications on the class material. You are responsible for checking NYU Classes for announcements on a regular basis (i.e., at least twice a week).

### ■ Academic integrity

Integrity is critical to the learning process and to all that we do here at NYU Stern. As members of our community, all students agree to abide by the NYU Stern Student Code of Conduct, which includes a commitment to:

- Exercise integrity in all aspects of one's academic work including, but not limited to, the preparation and completion of exams, papers and all other course requirements by not engaging in any method or means that provides an unfair advantage.
- Clearly acknowledge the work and efforts of others when submitting written work as one's own. Ideas, data, direct quotations (which should be designated with quotation marks), paraphrasing, creative expression, or any other incorporation of the work of others should be fully referenced.
- Refrain from behaving in ways that knowingly support, assist, or in any way attempt to enable another person to engage in any violation of the Code of Conduct. Our support also includes reporting any observed violations of this Code of Conduct or other School and University policies that are deemed to adversely affect the NYU Stern community.

### ■ General conduct and behavior

Students are also expected to maintain and abide by the highest standards of professional conduct and behavior. Please familiarize yourself with the various Stern Undergraduate Academic Policies.

### ■ Students with disabilities

If you have a qualified disability and will require academic accommodation of any kind during this course, you must notify me at the beginning of the course and provide a letter from the Moses Center for Students with Disabilities verifying your registration and outlining the accommodations they recommend. If you will need to take an exam at the CSD, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation.