



# Competitive Analysis

## (ECON-UB.0015.01.SP15)

■ **Course meetings.** Monday and Wednesday, 9:30pm to 11:45pm, Room T-UC21.

■ **Course description and learning goals.** 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. 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: Introduction and overview; 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. A detailed course outline will be distributed.

■ **Required course materials.** The required text is Cabral, Luis, *Introduction to Industrial Organization*, MIT Press, forthcoming. The second edition of this text is currently under preparation. Drafts of some chapters will be posted on NYU Classes.

■ **Assignment components 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 three 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 (45% each) as well as class participation (10%). Problem sets will be graded on a check  $\pm$  basis. Questions about grading must be made in writing and no more than a week after the tests are returned.

■ **Classroom norms.** Arrive to class on time and stay to the end of the class period. Chronically arriving late or leaving class early is unprofessional and disruptive to the entire class.

■ **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 ones 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.

■ **Help.** There are times when a little help can get you past an obstacle. If you're stuck, send me an email (lcabral@stern.nyu.edu) or stop by my office (KMC 7th floor, room 70). I try to respond quickly to email.