



Quantitative Microeconomics (ECON-UB.0010)

■ **Course meetings.** Monday and Wednesday, 11:00pm to 12:15pm, Room KMC 5–75.

■ **Course description and learning goals.** This course covers a series of advanced microeconomics topics. The goal is to introduce students to important economics issues as well as to a number of quantitative tools commonly used by researchers, managers and policy-makers. The set of tools includes, in a special way, game theory (the formal analysis of interdependent behavior). The set of topics is primarily focused on industrial organization, though not exclusively. It includes: trust and reputation (e.g., how product recalls affect firm value); contracts (e.g., Intel offers a 15% discount if you commit to buy Intel only); price discrimination (e.g., using cookies to segment online markets); auctions (e.g., selling Google’s sponsored ads, or selling Treasury Bills); consumer behavior (e.g., how a products position in an online site influences its click-through rate and how sellers should take that into account); innovation (e.g., patent pools and patent trolls); networks and platforms (e.g., Amazon, Uber, Airbnb).

■ **Target audience.** This course is aimed at students looking for a more quantitative approach to economics. It belongs to the Frontiers of Economics list of economics elective courses. These courses are of interest to students considering graduate school in economics or finance, as well as those looking to develop a sound foundation in quantitative economics skills.

■ **Course pre-requisites.** Competitive Analysis (ECON-UB.0015). Students are also expected to be comfortable with basic algebra and calculus, including systems of equations, derivatives, logarithms and NPV calculations.

■ **Course outline.** See detailed course outline.

■ **Required course materials.** L Cabral *Introduction to Industrial Organization*, 2nd Ed, MIT Press, 2017. Additional readings will be assigned in the detailed outline and/or distributed throughout the semester.

■ **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 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.

■ **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.