The graduate program in Economics, in the College of Arts and Sciences, emphasizes rigorous training in economic theory and quantitative methods and their creative applications. Both theoretical and empirical work is heavily based on mathematical modeling. In addition to core courses, students choose elective courses from the variety of fields offered in theoretical and applied economics. It is through these courses that breadth of economic knowledge is gained. Both Ph.D and M.A. programs share the same courses.

The program of study does not depend on prior knowledge of economics, though that is useful. Because of its emphasis on mathematical modeling, the graduate program is highly suitable for those whose undergraduate degrees are in physics, engineering, and mathematics. Those whose undergraduate degrees are in economics usually have to take a number of mathematics courses at a level not usually required for their undergraduate degree in order to be prepared for a graduate program.

Financial Support and application deadlines

Students in the M.A. program do not receive financial support and are expected to pay tuition. Ph.D students may receive financial support for up to four years of study and a tuition waiver for the entire duration of their study. The number of openings for the Ph.D program is small and acceptance is very competitive. Students who do well in the advanced M.A. program (see M.A. program details) are prime candidates to be accepted into the Ph.D program upon completion. Since the course requirements for both programs are almost identical they would only need to complete the teaching practicum and the research workshop (see Ph.D program details) and can start their research immediately.

All admissions are for the academic year starting in September. Applicants to the Ph.D program seeking financial aid are required to apply by January 15. Applications for the M.A. program are accepted until May 1 for foreign students and August 1 for domestic students.

Admission requirements of Economics department (for both Ph.D and M.A. programs)

All first year courses are mandatory and follow a two semester sequence. Thus the program admits students only for the Fall semester. Minimum requirements to be considered for admission, in addition to the minimum Graduate School requirements, are as follows, although exceeding these requirements increases the probability of admission:

A. A bachelor’s degree, with an average of at least B in the undergraduate major subject, which need not be economics. Applicants with majors in mathematics, the physical sciences, or engineering are encouraged.

B. At least one year of introductory differential and integral calculus and at least one semester of linear algebra in courses whose level is that required for physics majors in research universities with proficiency demonstrated by a grade of at least B in the courses. Additional semesters of multivariate calculus are highly recommended. Further mathematics such as real analysis and topology are very helpful.

C. Letters of recommendation from three instructors or academic advisors. The referees should be able to evaluate the mathematical preparation and ability of the applicant.

D. Submission of results of the Graduate Record Examination (GRE) General Test (verbal, quantitative, and analytical parts). Applicants with quantitative scores below the 80th percentile are generally not admitted.

E. Non-native speakers of English only: submission of results of the TOEFL examination, with a minimum score of 550 (paper), 213 (computer) or 90 (iBT). In addition, a score of at least 40 in the SPEAK test which can be taken upon arrival.

Students should be aware that admitted students generally exceed these requirements. However, students who do not meet or exceed all these requirements may apply if they think that their preparation as a whole shows they are capable of succeeding in the graduate program.

Requirements for the M.A. Degree in Economics
The M.A. program is rather unique in that it is research oriented. This program prepares students for careers in research institutions, government, international institutions and the private sector. Graduates from this program are also well prepared to continue their studies in top Ph.D programs in Economics and Finance as well as the best MBA programs. The M.A. program shares most courses with the Ph.D program, the requirements for admission are identical and so is the department’s dedication to these students in terms of office space, advising etc.

In the first year students take core courses that serve as a general foundation in economic theory and quantitative methods starting from the basics but done in a very mathematical way. The courses that provide the foundation in economic theory (micro and macro) and quantitative analysis (mathematical methods, statistics, and econometrics) are referred to as core courses. M.A. students are required to add to this one course in Computational Methods in Economics. In the second year students can choose between a basic and an advanced program.

The basic program requires a total of 11 courses and can be completed in three semesters. After the first year of study, students will take an advanced course in Econometrics and an elective and write an M.A. project.

The Advanced M.A. program requires 14 courses and can be completed in four semesters. The advanced program is attractive to both students who want to continue their studies for a Ph.D (here or elsewhere) and to those seeking employment. Students who are planning to continue into a Ph.D program may find it advantageous to take most of the remaining courses required for a Ph.D during the Spring semester. The additional semester offers students specialization in a field, at very high level and the opportunity to work with some well known experts in these fields. They are also required to write a paper in their field of specialization. This makes their degree much more marketable and well worth the extra cost and attractive to students seeking the job market after the completion of their M.A. The advanced M.A. degree offers three concentrations that utilize the special strengths of our department. The M.A in Economics with a concentration in Industrial Strategy emphasizes courses in Industrial Organization and Game Theory. The M.A in Economics with a concentration in People, Markets and Government emphasizes Labor Economics, Demography and Health. The M.A. in Economics with a concentration in Macroeconomics Policy focuses on Dynamic Macroeconomic Theory. Details about each of these concentrations and the required courses can be found at the Department’s web page.

Students can decide to take the basic or advanced program and the specific concentration at the end of the first year of study. Students are required to have an average grade of “B” or higher. The first year of study is a full time program. Subsequent courses can be taken on a part time basis and some, but not all courses are offered in the evening. No courses are offered in the summer.

Requirements for the Ph.D. Degree in Economics

The goal of the Ph.D program is to develop the capability of each student to conduct independent research and analysis. To this end the program has three phases: (1) a general foundation in economic theory and quantitative methods starting from the basics but done in a very mathematical way, (2) specialization in two or more fields of theoretical or applied economics, and (3) independent research culminating in the doctoral dissertation. These are not totally distinct phases but indicate the natural order of progression. Coursework is supplemented by independent study and research seminars. Throughout the program students have advisors to consult in developing a study plan that best meets their needs.

The Ph.D. degree requirements are as follows:

A. Course Requirements

A minimum of 15 courses in economics (including core courses) must be completed, with a grade of B or better in each elective course. Included in the elective courses must be at least two in each of two approved pairs of courses forming fields (listed below). However, the Ph.D. committee may approve a waiver of part of the 15-course requirement for students with graduate work elsewhere.

1. Core Courses: The courses that provide the foundation in economic theory (micro and macro) and quantitative analysis (mathematical methods, statistics, and econometrics) are referred to as core courses. Comprehensive examinations are taken in microeconomics, macroeconomics, and econometrics at the end of the first year of study.

2. Elective Courses and Fields of Specialization: In addition to core courses, normally at least six elective courses must be taken, including two pairs of courses, where each pair forms an approved field. It is usual but not necessary that a dissertation topic be chosen from one of these fields of specialization. The two elective fields must be satisfactorily completed by the end of the sixth semester. One field may be completed on the basis of an average grade of B+ or higher in the courses in that field. At least one field must be completed by passing a written comprehensive exam. Fields currently offered by the department are composed of courses in game theory, industrial organization, applied econometrics, labor economics, health economics, demographic economics, computational methods, and computational macroeconomics.

B. Second Year Paper, Seminars, and Workshops

Each student must write a successful research paper during the second year. Each student takes a research workshop in the fifth semester. The purpose of this workshop is to provide a structured introduction to research methodology. In addition, participation in program seminars and research workshops is considered an essential part of a student’s progress toward the doctorate. Seminars in economic theory and applied economics are presented on a regular basis by faculty, visitors, and graduate students. Workshops oriented toward thesis research are conducted by faculty and students working in related areas.

C. Advancement to Candidacy

Advancement to candidacy for the Ph.D. is achieved by satisfactory completion of most course requirements specified in item A, above, and the successful work on the second year paper. Advancement to candidacy normally must be achieved by the end of the fourth semester.

D. Dissertation
A dissertation, presenting the results of original and significant research, must be approved. An examination on a dissertation proposal research must be passed by the end of the sixth semester of study. The examination is both written and oral, and its syllabus is to be determined by the student’s dissertation committee in consultation with the student. Final approval of the dissertation will be by a committee including the candidate’s principal advisor, two other department members, and one member from another department. The results of the dissertation will be presented at a colloquium convened for that purpose.

E. Teaching

The program is committed to achieving a high quality of teaching and encourages all graduate students to acquire teaching experience during their graduate studies. The department operates a training program to prepare teaching assistants for classroom instruction.

F. Time Limit

If the degree requirements have not been met within five years of entry into the program, departmental approval is required for continuation in the program.

G. Dismissal Policy

A student may be dismissed from the program at the end of any semester in which he or she does not achieve a semester or cumulative B average or fails to meet the pertinent requirements for the Ph.D. as specified.

Faculty of Economics department

Professors

Brusco, Sandro, Chairperson, Ph.D., 1993, Stanford: Mechanism design, corporate finance, political economy.
Dubey, Pradeep, Ph.D., 1975, Cornell University: Game theory; mathematical economics.
Montgomery, Mark, Ph.D., 1982, University of Michigan: Economic demography; development economics; econometrics.
Muench, Thomas J. Ph.D., 1965, Purdue University: Mathematical economics; Macro economics; econometrics.
Rizzo, John (joint with the Department of Preventive Medicine) Ph.D., 1985, Brown University: Health economics, public health.
Sanderson, Warren C., Ph.D., 1974, Stanford University: Economic demography; economic history; labor economics.
Tauman, Yair, Ph.D., 1978, Hebrew University, Jerusalem: Industrial organization; game theory.
Zweig, Michael, Ph.D., 1967, University of Michigan: Political economy; labor economics.

Associate Professors

Benítez-Silva, Hugo, Ph.D Program Director, Ph.D., 2000, Yale University: Labor economics, computational economics.
Cárceles-Poveda, Eva, Ph.D., 2001, Universitat Pompeu Fabra: Macroeconomics, financial economics, international economics.
Dawes, William, Ph.D., 1972, Purdue University: Econometrics; economic history.

Assistant Professors

Atesagaouglu, Orhan Erem, Ph.D. 2008 University of Minnesota: Macroeconomics; Consumer Finance; International Finance
Rendon, Silvio, Ph.D., 1997, New York University: Labor economics; dynamic modeling.
Tan, Wei, Ph.D., 2005, Johns Hopkins University: Industrial organization; applied econometrics; health economics.

NOTE: The course descriptions for this program can be found in the corresponding program PDF or at COURSE SEARCH.