FGV | SAO PAULO SCHOOL OF ECONOMICS

GRADUATE PROGRAM GUIDEBOOK

GRADUATE PROGRAM

The School offers two programs of study, one leading to a master's degree and one leading to a doctoral degree. Both programs include courses in the core subjects of Economics (Econometrics, Macroeconomics, and Microeconomics) as well as more advanced field courses. Besides completing their required coursework, students in the master's program must successfully complete and defend a master's dissertation in order to obtain a master's degree and students in the doctoral program must successfully complete and defend a doctoral thesis in order to obtain a doctoral degree.

Foreign students admitted to the graduate program must provide the Registrar's Office with a number of documents in order to enroll in the program. Please refer to http://economics-sp.fgv.br/graduate-program/admission for information about these documents.

The graduate program operates on a quarter basis, with four quarters per year lasting approximately seven weeks each. The first quarter takes place in March and April, the second quarter takes place in May and June, the third quarter takes place in August and September, and the fourth quarter takes place in October and November. The graduate program also offers some courses in the summer (January and February) and winter (July) periods.

MASTER'S PROGRAM

Students in the master's program must take nine core courses, including summer courses on Mathematics and Statistics in their first year, two applied courses, and seven field courses. Students must also enroll in the departmental research seminars for at least two quarters, and must present a dissertation proposal at an internal seminar. Students must complete and defend their master's dissertation in thirty months or less. The dissertation defense is a public lecture, and a student must have his or her dissertation approved by a dissertation committee.

DOCTORAL PROGRAM

Students in the doctoral program must take fourteen core courses, including summer courses on Mathematics and Statistics in their first year, two applied courses, and ten field courses. Students must also enroll in the departmental research seminars for at least four quarters, and must present a thesis proposal at an internal seminar. Students must complete and defend their doctoral thesis in 54 months or less. The thesis defense is a public lecture, and a student must have his or her thesis approved by a thesis committee.

COURSES AND SEMINARS

Core Courses

The core courses in the master's program are the following:

Statistics;
Mathematics for Economists;
Microeconomics I to III;
Econometrics I and II;
Macroeconomics I and II.

The core courses in the doctoral program are the following:

Statistics;
Mathematics for Economists;
Microeconomics I to IV;
Econometrics I to IV;
Macroeconomics I and II, and two out of the following five macroeconomics courses: Macroeconomics III, Macroeconomics IV, Topics in Macroeconomics, Economic Growth, and Topics in Economic Growth.

We recommend that students take the core courses in their first year of study in order to acquire a firm foundation for their subsequent work.

Applied Courses

There are two applied courses:

Applied Microeconomics;
Applied Macroeconomics.

Field Courses

Our faculty offers the following field courses on a regular basis:

Asset Pricing;
Bayesian Econometrics;
Behavioral Economics;
Behavioral Finance;
Computational Methods in Empirical Finance I and II (*);
Corporate Finance;
Development Economics;
Dynamic Coordination (winter);
Economic Growth;
Economics of Crime;
Economics of Education (*);

Empirical Asset Pricing;
Financial Econometrics (**);
Forecasting (**);
International Finance;
Labor Economics (**);
Microeconometrics I and II;
Political Economy;
Public Economics;
Spatial Econometrics;
Theory and Quantitative Methods in International Trade;
Topics in Macroeconomics: Liquidity and Financial Intermediation;
Trade Policy (winter);
Urban Economics.

*Odd years; **even years.

Core courses in the doctoral program that are not core courses in the master's program count as field courses for the master's program.

Our faculty offers other field courses on specific topics of their choosing. The offer of these topic courses varies from year to year.

Seminars

The department holds two weekly research seminars (Seminários Acadêmicos). Students in the master's program must enroll in one of these two seminars for two quarters and students in the doctoral program must enroll in one of these two seminars for four quarters. We recommend graduate students in their second year and after to attend the research seminars at least once a week even when not enrolled in one of them.

The department also holds a weekly internal seminar (Seminário de Tese). Students in the master's program must enroll in the internal seminar for two quarters and present a dissertation proposal at this seminar by the end of their second year. Students in the doctoral program must enroll in the internal seminar for four quarters and present a thesis proposal at this seminar by the end of their third year.

RECOMMENDED PLAN OF STUDY

MASTER'S PROGRAM

We expect master's students to finish their coursework in the first six quarters of the program. The recommended plan of study is as follows.

Year 1

Summer Courses

Statistics
Mathematics for Economists

First Quarter

Microeconomics I
Macroeconomics I
Econometrics I

Second Quarter

Microeconomics II
Macroeconomics II
Econometrics II

Third Quarter

Microeconomics III
Two field courses

Fourth Quarter

Applied Microeconomics
Two field courses

Year 2

First Quarter

Applied Macroeconomics
Two field courses

Second Quarter

One field course
Begin work on master's dissertation

Third and Fourth Quarters

Enroll in the internal seminar and in one of the two research seminars. Present dissertation proposal at the internal seminar. Conclude master's dissertation.

DOCTORAL PROGRAM

Doctoral students have more flexibility in designing their plan of study. We recommend that they finish their coursework in the first two years of the program. Depending on their fields of interest, we suggest that doctoral students either take all core macroeconomics courses in the first year and delay Applied Microeconomics to the second year or take Applied Microeconomics in the first year and delay one of their core macroeconomics courses to the second year. Doctoral students may have to take courses in their third year depending on their fields of interest and on the department's field course offerings in a given year. The suggested plan of study is as follows.

Year 1

Summer Courses (January and February)

Statistics
Mathematics for Economists

First Quarter

Microeconomics I
Macroeconomics I
Econometrics I

Second Quarter

Microeconomics II
Macroeconomics II
Econometrics II

Third Quarter

Microeconomics III
Econometrics III
Core macroeconomics course

Fourth Quarter

Microeconomics IV
Econometrics IV
Core macroeconomics course or Applied Microeconomics

Year 2

First Quarter

Applied Macroeconomics
Two field courses

Second Quarter

Three field courses
Begin work on doctoral thesis

Third Quarter

Three field courses

Fourth Quarter

Two field courses
Core macroeconomics course or Applied Microeconomics

Year 3

Enroll in the internal seminar and in one of the two research seminars in every quarter.
Present thesis proposal at the internal seminar.

Year 4

Conclude doctoral thesis.

COURSE DESCRIPTIONS

CORE COURSES

Econometrics I

This course is an introduction to Econometrics. The first part of the course covers the basics of ordinary least squares: correlation versus causality, bivariate and multivariate regression, and hypothesis testing. It then moves to the basics of instrumental variables. The second part of the course provides a more advanced treatment of the material covered in the first part.

Econometrics II

This course is the second course in the Econometrics track. It starts with a discussion of extreme estimators, their consistency, asymptotic normality, and hypothesis testing. It then moves to a discussion of the generalized method of moments (GMM). This part begins with a discussion of instrumental variables and then considers the general approach to GMM, its asymptotic properties, and hypothesis testing. The course concludes with a discussion of discrete response models—Probit and Logit—and censored and truncated regression models.

Econometrics III

This course is an introduction to time-series methods in Econometrics. It covers the following topics: stationary series, aspects of trend behavior, detrending mechanisms and their properties, unit roots, and cointegration. The course also discusses prediction of stationary processes, introducing students to the theory of Hilbert spaces for this purpose. The focus is on time-domain methods, but the course also discusses frequency-domain methods.

Econometrics IV

This course presents the main econometric methods for panel data analysis. It encompasses both theory and empirical applications.

Macroeconomics I

This course covers the main components of macroeconomic models: consumption and savings, investment, external sector, sticky prices, coordination failures, monetary policy, and time inconsistency.

Macroeconomics II

This course cover topics in Labor Economics, Monetary Economics and Financial Economics. It begins with an analysis of models of equilibrium unemployment in frictional labor markets. It then proceeds to study a wide array of models of financial frictions. It concludes with the study of rational bubbles and inefficient credit booms.

Macroeconomics III

This course introduces techniques and methods for analyzing macroeconomic questions, with a particular focus on computational methods. The topics covered include approximation of stochastic processes, function approximation techniques, linear methods, Blanchard-Kahn conditions and quasi-linear methods. The course introduces students to value and policy function iterations and methods for analyzing models with heterogeneous agents.

Macroeconomics IV

This course provides an overview of recent developments in monetary economics, with special emphasis on models with nominal rigidities and their implications for monetary policy. The course first introduces the classical real business cycles model and discusses the neutrality of monetary policy in this framework. The course then introduces extensions of the classical model with imperfect competition and price rigidities, leading to the canonical New Keynesian (NK) model. The course then studies monetary policy rules in the NK framework. The course also covers discretion and commitment in monetary policymaking, the interaction between fiscal and monetary policies, and the open economy dimension of monetary policy.

Microeconomics I

This course presents the basic elements of Microeconomic Theory. It begins with an introduction to nonlinear programming, followed by an exposition to preferences and choice, classical demand theory, and choice under uncertainty.

Microeconomics II

This course is an introduction to competitive General Equilibrium Theory. It begins with the Arrow-Debreu competitive equilibrium in a static environment and the Welfare Theorems. It then moves to dynamic models with rational expectations, Radner equilibrium, complete and incomplete markets, financial markets, non-arbitrage pricing, and asset pricing.

Microeconomics III

This course is an introduction to game theory and information economics. It begins with the study of games (static and dynamic) of complete information. It then proceeds to the study of games of incomplete information. The course concludes with an introduction to adverse selection, signaling, and screening.

Microeconomics IV

This course presents the basics of Economics of Information, which is the study of asymmetric information.

Mathematics for Economists

This course presents the basic mathematical tools for economists: basic set theory, real sequences, functions, metric spaces, linear algebra, convexity, and differential calculus.

Statistics

This course covers the main notions of probability theory and statistical inference. The first part develops the fundamentals of probability theory with a focus on random variables in Euclidian spaces. The second, and final, part applies the concepts of probability theory to the problem of statistical inference.

APPLIED COURSES

Applied Macroeconomics

This course covers recent research topics in economic growth and development, emphasizing the role of institutions and financial development on growth and economic development. The course discusses applications to Brazil.

Applied Microeconomics

This course discusses recent advances in the micro-development literature and their application to the study of social, educational, and labor market policies in Brazil.

REGULAR FIELD COURSES

Asset Pricing

This course presents asset-pricing models based on representative-agent problems. The course starts with the canonical Consumption CAPM model and discusses how it fails to capture the main empirical features of stocks returns. It then discusses the modifications introduced to reconcile theory with data. These include external habit and Epstein-Zin preferences, consumption processes subject to rare disaster shocks and long-run risks, consumption of durable goods and housing, models with incomplete markets and heterogeneous agents, models of incomplete information and learning, models that deal with different conditioning variables, and, finally, models that look at the cross-section of value-growth stock.

Bayesian Econometrics

This course is an introduction to Bayesian Econometrics. It first presents the basic principles of Bayesian statistics. It then introduces students to consolidated Bayesian techniques of estimation and, whenever possible, presents new advances in the field.

Behavioral Economics

This course presents experimental evidence on behavioral biases, discusses how these biases affect individual decision-making and the working of markets and policy, and presents empirical evidence that such biases are economically relevant. It covers the following topics: Prospect theory, framing and mental accounting, self-control and time inconsistency, social preferences, non-standard beliefs and decision-making, and self-signaling and self-deception.

Behavioral Finance

This course discusses the empirical facts that challenge the traditional paradigm in financial markets, which assumes that investors have rational beliefs, optimize expected utility, and there are no limits to arbitrage. It then discusses how the field has tried to model and to deal with these facts. The course covers the following topics: Prospect theory, framing and mental accounting, limited attention, non-standard beliefs and decision-making, and limits to arbitrage.

Computational Methods in Empirical Finance I

This course is the first part of a two-course sequence on computational methods in empirical finance using EVIEWS, MATAB, OxMetrics and R. The first part starts with a discussion of stylized facts in financial data and then covers the following topics: univariate and multivariate GARCH models, measures of risk, mixed-data sampling and high frequency models for volatility.

Computational Methods in Empirical Finance II

This course is the second part of a two-course sequence on computational methods in empirical finance using EVIEWS, MATLAB, OxMetrics and R. The second part covers the following topics: simulation methods, forecasting risk, risk management, value at risk and principal components, backtesting and stress tests, extreme value theory, copulas, and asset allocation.

Corporate Finance

This course focuses on how firms should and do manage their financing activities. The objective is to understand what determines the choice of firm capital structure, whether it can be optimized or not, and how the interactions of owners, managers and creditors affect that choice. The course discusses theoretical and empirical papers, so that the student can prepare for doing research in this area.

Development Economics

This course covers classic topics of research at the intersection of development, labor, and demographic economics. It is both theoretical and empirical, intercalating canonical models with the associated empirical evidence. The first part discusses family decisions regarding investments in children and fertility, and highlights their relevance for understanding the evolution of inequality and the historical processes of demographic transition. The final part of the courses discusses labor market discrimination and the empirical challenges associated with understanding and measuring it.

Dynamic Coordination

This course presents the literature on dynamic coordination models. After a brief visit to the 'global games' literature, the course presents the basic framework of the dynamic coordination model with timing frictions, shows theoretical results about equilibrium and welfare in this framework, and develops tools that are used in applications. After this theoretical part, the course studies applications such as the choice between products with network externalities (Facebook or Google+), the effect of coordination failures in macroeconomics, among others.

Economic Growth

This course discusses the mechanics of economic growth and technological change, and the sources of income and growth differences across countries. The course introduces students to the most important workhorse models and the key empirical findings in the literature on economic growth. The main objectives of the course are (i) explaining the patterns of growth and development observed in historical data and (ii) understanding how various government policies can affect a country’s long-run growth experience.

Economics of Crime

This course analyzes crime through an economics perspective. It covers both theory and empirics. The course first introduces the rational choice model of crime and uses it to analyze standard topics in the study of criminal justice systems (incarceration, policing, and deterrence versus incapacitation). It then moves to a discussion of the following topics: drugs and economics, the relationship between violence and social factors (poverty, education, inequality, social programs, among others), behavioral economics and crime, the geographic analysis of crime and the economics of corruption.

Economics of Education

This course covers topics related to the economics of education. The emphasis is on the determinants of the supply and demand of education. The course also considers the role of the education technology and the economic environment (incentives, social interactions, and so on) on student learning.

Empirical Asset Pricing

This course aims to familiarize students with the main empirical stylized facts in asset pricing and to prepare them to do research in the topic on their own. The course discusses and critically evaluates empirical work in asset pricing and provides students with tools to carry out research in the area.

Financial Econometrics

This course covers topics in financial econometrics. It presents linear and non-linear models for conditional means and conditional variances, extreme value theory, the theory of copulas, and some additional topics (such as models for high-frequency data and continuous time models).

Forecasting

This course is a topics course in forecasting. It covers the following topics: forecasting with linear models, automated model selection, model misspecification, forecasting with dynamic models, forecasting evaluation and combination, forecasting time-series models, forecasting non-linear models, and forecasting in large data sets and volatility.

International Finance

This course covers models of currency crises, debt crises and banking crises. It starts with the classical models of the literature and reaches the most recent developments. These include the role of beliefs in crises, self-fulfilling expectations, multiple equilibria, equilibrium selection, the role of public information, herd behavior, moral hazard and crises, quantitative analyses of debt crises, and international lending of last resort.

Labor Economics

This course examines topics in labor economics. The focus is on the forces driving labor supply and demand. The course concludes with a discussion of labor market policies.

Microeconometrics I

This course is the first part of a two-course sequence that presents econometric methods for impact evaluation. The first part discusses the problem of causal inference, the use of randomized experiments, and methods of selection on observables. The course discusses theoretically the methods and presents applications with microdata.

Microeconometrics II

This course is the second part of a two-course sequence that presents econometric methods for impact evaluation. The second part focuses on identification and estimation under failure of the selection on observables assumption. The course discusses theoretically the methods of difference in differences, synthetic control, regression discontinuity design and quasi-natural experiments. Additionally, it presents applications with microdata.

Political Economy

This course presents students to the political economy literature. The goal is to familiarize them with the central themes and techniques used in theoretical and empirical work in the field.

Public Economics

This course provides a general overview of the modern literature on public economics. The main topics that the course covers are optimal taxation and public provision of goods, addressing issues such as redistribution, health, education, and sanitation policies.

Spatial Econometrics

This course presents some of the main results in modern statistical inference for spatial data, emphasizing the practice of data analysis and model estimation using the software R. The course also investigates the interaction of the spatial and temporal dimensions of data, and reviews some of the main strategies for modeling this type of data.

Theory and Quantitative Methods in International Trade

This course studies recent developments in the field of international trade. It mixes theory with empirics, focusing on quantitative general equilibrium models of trade and on "structural" empirical studies. The course covers several topics, including the effects of trade on labor markets, welfare gains from trade, trade and technological differences, and gravity equation estimation.

Topics in Macroeconomics: Liquidity and Financial Intermediation

This course covers a selection of papers dealing with the real effect of liquidity shortages. Some of these papers discuss the public provision of liquidity, while others focus on the private provision of liquidity. The course pays particular attention to the underlying frictions that make liquidity an economically relevant issue.

Trade Policy

This course covers the economics and the political economy of trade policy and of international trade agreements, from a theoretical and an empirical perspective. It starts with a discussion of the instruments of trade policy and the political economy factors that shape them. The course then moves to the driving forces and the consequences of multilateral and preferential trade agreements.

Urban Economics

This course explores theoretically and empirically a range of topics related to the economics of cities. The course begins with a discussion of the modeling and estimation of agglomeration economies. It then discusses models of housing markets and housing policy, with a focus on topics that are relevant to the urbanization of developing countries, such as the understanding of the causes and consequences of slums. Additional themes covered in the course are local labor markets, land use regulations and place-based policies. The course will discuss how urban economics relates to other areas, such as public, development, labor and regional economics.