

MASTER 2
PARCOURS : ECONOMIC ANALYSIS
MENTION : ECONOMIE
Établissements porteurs : CYU et ESSEC
Site d'enseignement : CY Cergy Paris
Université (site des Chênes) et ESSEC
Business School, Cergy

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Site web :

<https://thema.u-cergy.fr/formations/article/master-2-in-economic-analysis-master-ea>

DESCRIPTION :

Langue d'enseignement : anglais

The Master 2 in Economic Analysis is a joint program between CY Cergy Paris Université and ESSEC Business School. It offers high quality training in economics in a one-year program, where all courses are taught in English. Its purpose is to prepare for further studies in a PhD program. Therefore, the program focuses on economic theory as well empirical methods. The content of the courses is available [here](#).

The Master 2 in Economic Analysis is part of a Ph.D. program in Economics of ESSEC Business School, in partnership with CY Cergy Paris Université. Students who have successfully completed the master program may demand admission to the Ph.D. program. They are also eligible to apply to the doctoral program at CY Cergy Paris Université.

Students gain a mastery of quantitative methods (optimization, econometrics, simulation methods) and the basic concepts of the individual choice theory and the micro and macroeconomic equilibrium. Specialization courses address current and advanced research in applied fields.

The training in research follows international standards of scientific quality in economy. Fluency in English facilitates the research activity, which is international in nature.

The two partner institutions have a strong scientific visibility. According to international rankings, CY Paris Cergy Université is among the very best French universities, while ESSEC is among the French business schools that are most active in research.

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Excellence scholarships

The M2 Economic Analysis program provides several scholarships for excellent students.

Both the CY Cergy Paris University Merit-Based Scholarships and the LABEX excellence scholarship amounts to a total of 7,000 euros, paid in ten monthly instalments over the academic year. The criteria for selection are academic excellence as well as the candidate's potential. A selection committee from CYU will choose the beneficiaries. Those scholarships are open to students who already have a bachelor's degree (or an equivalent level in France) and who are currently in their first year of a Master's degree (M1) or already hold a M1. Those students should be admitted to the M2 EA program hence they should satisfy to all requirements for this program.

Deadline : the 23rd of April, 2021.



PROGRAMMES D'ENSEIGNEMENT / CONTENT OF COURSES :**1st term, September to December****Choice and Decision Theory** (lectures: P. Vida, classes: P. Vida)

Microeconomic theory of individual decision making in the settings of consumption and production decisions. General Equilibrium, introductory examples.

Econometrics I: Fundamentals of Econometric Theory (lectures: O. Donni, classes: J. Rivero-Wildemaue)

Finite Sample Properties of Ordinary Least Squares. Large Sample Properties with Random Sampling. Instrumental Variable Methods. Maximum Likelihood Methods. Topics in Time Series.

Mathematics for Economics (lectures: M. Pivato and M. Ochea, classes: R. Gomes de Oliveira)

A brief review of the essential mathematical concepts and notation most likely to be encountered in economic theory. Topics include: Single-variable and multivariate calculus. The algebra of vectors and matrices. Unconstrained and constrained optimization (Lagrange and Kuhn-Tucker). Difference equations. Dynamic optimization. Topology of Euclidean space (convergence, continuity, compactness). Convex sets. Correspondences. Fixed point theorems and applications to the existence of Nash or Walrasian equilibria. Differential equations (time permitting).

Macroeconomics I: Growth and overlapping generation model - starting date: October (lectures: O. Charlot)

The Solow growth model. Empirical investigations on economic growth/growth and human capital. Optimal growth: the Ramsey growth model. The OLG model. Endogenous growth, AK model. Endogenous technical change.

Microeconomics I: Choice under Uncertainty and Game Theory - starting date: October (lectures: G. Desgranges)

Risk and Uncertainty. Decision under uncertainty. GE under uncertainty. Main concepts and tools of game theory.

Applications of Econometrics I (10 hours) (lectures: G. Chapelle)

Applications of Econometrics I to real data using Python, Stata and R: simple linear regression, ordinary linear regression, randomized controlled trial, multiple linear regression on cross-sectional data, multiple linear regression on panel data.



2nd term, January to March

Macroeconomics II : Fluctuations (lectures : F. Bec)

Overview of current economic fluctuations theories, with a special focus on the inflation-unemployment tradeoff from Dynamic Stochastic General Equilibrium (DSGE) models. Resolution and simulation, qualitative and quantitative evaluations of such models under rational expectations hypothesis. Analysis of optimal stabilization policies.

Microeconomics II : Welfare Economics and Markets failures (lectures : G. Desgranges and A. Dosis)

The two welfare theorems and possible market failures. Asymmetric information among the market participants and the problem of achieving efficiency. Corrections of these different market failures.

Applications of Econometrics II (lectures : G. Chapelle and M. de la Rupelle)

An applied course that relies on statistical softwares. Specific identification techniques used in the empirical literature (e.g., Propensity Score Matching, Differences in Differences, Regression Discontinuity Design and Natural Experiments). Nonlinear regression (using binary Probit/Logit/Poisson models and machine learning algorithms), Autoregressive models. Simple linear regression on time series (CAPM model with heteroskedasticity tests and tests for the autocorrelation of the error term). Examples using datasets, notably those from articles published in the best scientific journals.

One course among 2 described below:

One course is to be chosen among 2 described below.

Microeconometrics (lectures: P. André)

The econometrics of cross-section and panel data. Linear and non-linear econometric models, continuous and discrete dependent variables. Instrumental variable estimators, linear panel data estimators, models for discrete dependent variables and sample-selection models.

Time Series Analysis (lectures: G. Chevillon)

Stationary time-series and non-stationary multivariate processes (structural and reduced-form). A typology of linear dynamic time-series models and, concept of cointegration, with applications to dynamic systems of equilibrium-correction relations. Modeling and forecasting macroeconomic and financial systems. and study of state-space models.



2 elective courses among any of the three specializations below

Industrial Organization

Industrial Organization (lectures : S. Biancini and Th. Tregouët)

Main techniques and themes of Industrial Organization: strategic behavior of firms, market competition, competition and antitrust policy.

Empirical Industrial Organization (lectures: R. Renault and A. Niedermayer)

Structural empirical models in Industrial Organization. Demand modeling in IO and their applications, analysis of structural estimation of auction models, regulation, asymmetric information models and entry models.

International Economics

International Finance (lectures : C. Terra)

The main models of open macroeconomics and international finance and recent research on the field. Intertemporal model of the current account; monetary models of exchange rate determination with fixed prices and flexible prices; models of currency crises; portfolio diversification.

International Trade (lectures : P. Bombarda)

Traditional and more recent theories of international trade. Ricardian and Heckscher-Ohlin models, extension to many goods and factors. Models of trade with imperfect competition. Gravity equations. Trade from the point of view of individual firms.

Public Economics

Labor Economics

Themes in modern labor economics, focus on microeconomic models and empirical research with relevant policy implications. The role of human capital accumulation, wage determinants, education economics and labor supply. Discussion of some macroeconomic issues about employment and unemployment.

Public Economics (lectures: P. Belan and L. Jacquet)

Taxation and its impact on economic behavior (e.g., labor supply, savings decisions), economic equilibrium (tax incidence). Under informational imperfections and other distortions. analysis of indirect taxation, taxation of capital, nonlinear taxation of income and the provision of public goods.



3rd term, April to June

Master's Thesis

The master's thesis is a piece of original scholarship, written under the direction of a faculty advisor, on a relevant topic in economics the student is interested in. Students are strongly advised to find a supervisor by the beginning of the academic year. Meetings with professors to discuss possible topics will be organized.

Research seminar I: Professors seminar (lectures : L. Jacquet)

The role of this seminar is to develop critical thinking skills through active participation and writing of referee reports by students. Students will have to write a referee report on (at least) one of the papers presented at seminars. By the end of the term, students must be able to read a research paper, to know how to replace it in the literature, how to identify its strengths and weaknesses and to write an effective referee report.

Research seminar II: Students seminar (lectures : L. Jacquet)

The objective of this seminar is to develop students' oral skills and ability to present research papers, as well as to develop critical thinking through the discussion of other students' presentations. Each student makes several presentations to other students and professors. He/she presents some research papers related to the topic of his/her master thesis and focuses on his/her own research subject and methodology.



Courses	Hours		Credits
	Lectures	Classes	
T1 : September to December			
Econometrics I: Fundamentals of Econometric Theory	27	13.5	3
Choice and Decision Theory	27	13.5	2
Macroeconomics I: Growth and overlapping generation model (starting date: October)	27		2
Microeconomics I: Choice under Uncertainty and Game Theory (starting date: October)	27		2
Applications of Econometrics I	10		1
Mathematics for Economics	27	13.5	2
T2 : January to March			
Applications of Econometrics II	27		3
Macroeconomics II : Fluctuations	27		3
Microeconomics II : Welfare Economics and Markets Failures	27		3
<i>Econometrics III : 1 course among 2</i>	Microeconometrics	27	3
	Time Series Analysis	27	3
<i>2 electives among 6 (within 3 specializations)</i>	Industrial Organization	27	3
	Empirical Industrial Organization	27	3
	International Finance	27	3
	International Trade	27	3
	Labor Economics	27	3
	Public Economics	27	3
T3: April to June			
Master's Thesis			30
Research Seminar 1: Professor's Seminar			
Research Seminar 2: Student's Seminar			

