

Master in Quantitative Economics

First year of the Master Program

Compendium of the syllabus Academic Year: 2020-2021

Summary of the program

Course	hCM	ECTS	Teacher
Master 1, Up-grade course (Late August – Early September 2020)			
Mathematical and Statistical tools	30	3	Jean-Philippe Lefort / Eric Bonsang
Master 1, Semester 1 (September - December 2020)			
Microeconomics 1	36	6	Maria-Luisa Ratto
Macroeconomics 1	36	6	Anne Epaulard / Lise Patureau
Macroeconometrics	36	6	Magali Marx
Game Theory	36	6	Marion Oury
Data Management and Programming	36	3	Fabrice Rossi
Master 1, Semester 2 (January - April, 2021)			
Fundamental mandatory courses (27 ECTS)			
Microeconomics 2: Public Economics	36	6	Gabrielle Fack/ Sidartha Gordon
Industrial Organization	36	6	Jérôme Mathis / Anna Creti
Macroeconomics 2	36	6	Axelle Arquié
Microeconometrics	36	6	Olivia Bertelli / Eric Bonsang
Database and Stata programming	18	3	Olivia Bertelli / Eric Bonsang
Options, Choose 1 (3 ECTS)			
Public policy	21	3	Eve Caroli / Brigitte Dormont
Advanced Industrial Organization	21	3	Anna Creti
International Trade: Theory and Policy	21	3	Joachim Jarreau

Semester 1, up-grade course (End of August and early September)

Mathematical and statistical tools

Teacher: Jean-Philippe Lefort (Université Paris-Dauphine, LEDa & PSL Research University) and Eric Bonsang (Université Paris-Dauphine, LEDa & PSL Research University)

Master 1, Semester 1

Course load: 30h, 10 sessions (3 hours per session)

ECTS: 3

Overview:

The up-grade course in mathematical and statistical tools is made of two parts, which alternate over time. The first part is devoted to mathematical and optimization techniques. It will cover the following topics: Solving of differential equations, linear algebra, static optimization problems (including the resolution of the Lagrange and nonlinear programming problems) and dynamic optimization problems (Hamiltonian, maximum principle).

The second part is devoted to Statistics and Probability. In this part of the course, we will first review the fundamentals of probability, followed by the fundamentals of mathematical statistics beginning with the properties of random samples and statistical inference involving estimation and hypothesis testing. We will also introduce the simple regression model.

Prerequisites

The course is taught for students who do not have a strong background in mathematics and optimization. However, knowledge of basic mathematical tools as typically taught in the Bachelor's degree in Economics is necessary to follow the course.

Course Objectives:

The objective of the course is to provide students with both an understanding and some practice of the core techniques in mathematics and statistics, which are necessary to master for subsequent core and specialization courses of the Master's program.

After attending the classes, the students will master the main tools of mathematics and optimization used in economics and will have strengthened their analytical ability. They will be well-equipped to continue in the Master's program as all core economics and econometrics courses assume a deep prior knowledge of calculus techniques, matrix algebra, and constrained optimization. As for the Statistical part, the students are expected to understand:

- The concept of random variables and their probability distributions
- The concept of random sampling, the finite sample and asymptotic properties of estimators
- The basics of hypothesis testing
- The definition and the properties of the simple regression model

Mode of Assessment

Written assignment and active participation **in class**. No final exam.

Course Schedule

Mathematics & optimization

Session 1: Linear algebra and normed spaces

Session 2 Differentiation, introduction to differential equation

Session 3 Differential equations

Session 4 Static optimization

Session 5 Dynamic optimization

Statistics & Probability

Session 1: The concept of random variables and their probability distributions

Session 2: The concept of random sampling, the finite sample and asymptotic properties of estimators

Session 3: Hypothesis testing

Session 4: The definition and the properties of the simple regression model (Part 1)

Session 5: The definition and the properties of the simple regression model (Part 2)

Readings

Mathematics & optimization

Essential Mathematics for Economic Analysis, by [Prof Knut Sydsaeter](#) & [Prof Peter Hammond](#)

Further Mathematics for Economic Analysis, by [Prof Knut Sydsaeter](#) & [Prof Peter Hammond](#)

Statistics & Probability

Introductory Econometrics. A Modern Approach. Jeffrey Wooldridge.

Semester 1, September to December

Macroeconometrics

Teacher: Magali Marx (Banque de France)

Course load: 36, 12 sessions, 3 hours per session

ECTS: 6

Status: Mandatory

Overview:

This course will provide the fundamental tools in macroeconometrics. It starts providing the basic knowledge on the modelling of univariate time series. We will present several statistical tests used to uncover their features and the main models used to represent their behaviours. The course will also introduce to forecasting techniques. We will then present the modelling of multivariate time series with VAR models. We will then give an introduction of the structural analysis which can be run through VAR models.

Prerequisites

Statistics, econometrics (undergraduate level)

Course Objectives:

The objective of the course is to provide the student with the solid theoretical and practical knowledge of the methods used to analyse and model time series data. Practical skills will be acquired through the modelling of economic time series with econometric software (gretl,

matlab). After having attended the classes, the students will master the main tools of the modelling of time series and be able to run an empirical work by themselves.

Game Theory

Teacher: Marion Oury, University Paris-Dauphine, LEDa & PSL

Course load: 36 (12 sessions of 3h)

ECTS: 6

Status: Mandatory

Overview

The content of the course can be divided in two parts. First, we will study strategic games in a static context: Pure and mixed strategy Nash Equilibrium, correlated equilibrium; Definition of a Bayesian game, Bayesian Nash equilibrium; Dominant/-dominated strategies and rationalizability. Second, we will study the multistage games: Subgame perfect equilibrium; Repeated games; Perfect Bayesian equilibrium.

Prerequisites

Fundamental notions in mathematics and optimization

Course Objectives

The objective of the course is to give some fundamental background in interactive decision making and its applications. After having attended the classes, the students will be able to understand the basic tools of game theory and the importance of this field in economics and finance.

Course Schedule

1. Introduction to strategic games, pure strategy Nash equilibrium
2. Dominant and dominated strategy
3. Mixed strategy, mixed strategy Nash equilibrium
4. Correlated equilibrium
5. Rationalizability
6. Bayesian games
7. Bayesian Nash equilibrium
8. Introduction to multistage games
9. Subgame perfect equilibrium
10. Repeated games
11. Folk Theorems
12. Perfect Bayesian equilibrium

Readings

R. Gibbons, "Game theory for applied economists", Princeton University Press, 1992

M. Osborne, A. Rubinstein "A course on game theory", MIT Press, 1994 (available on line).

M. Osborne "An introduction to game theory", Oxford University Press, 2003 (elementary version of the previous one).

Macroeconomics 1

Teacher: Anne Epaulard (University Paris-Dauphine, LEDa & PSL) and Lise Patureau (University Paris-Dauphine, Leda & PSL)

Course load: 36 (12 sessions of 3h)

ECTS: 6

Status: Mandatory

Overview:

The course is organized in two parts.

Growth models: After presenting the stylized facts about long run economics growth, the course will first present the neoclassical growth model (Solow and Ramsey). We will then uncover the endogenous growth models: Models with externalities (Paul Romer, 1986), the role of research and development and human capital (Romer, 1990), and the creation/ destruction model (Aghion & Howitt, 1992).

Business cycles: After presenting the stylized facts about the business cycle, the course will study the canonical real business cycle model. The role of price and wage rigidities in accounting for business cycles will be discussed by analyzing the New Keynesian Phillips curve model.

Prerequisites

Mathematics and optimization

Course Objectives:

The course will provide students with sound knowledge and understanding of the basis of modern macroeconomic theory regarding (i) long run economic growth and (ii) business cycles. After attending the classes, the students will master the fundamental models of modern macroeconomics in view of analysing the key issues relative to economic growth in the long run. They will also get familiar with the modelling of business cycles fluctuations to explore the role of stabilization policies.

Course Schedule

The course will cover the following topics.

1. Stylized facts about long run growth – Growth decomposition and the Solow residual
2. The Solow model and conditional economic convergence
3. The Ramsey model
4. Externalities and the AK growth model; the role for tax policy
5. R&D, innovation and growth (Romer' (1990) model)
6. Growth in creation / destruction models
7. Stylized facts about business cycles
8. The canonical neo-classical model of fluctuations
9. The real business cycle model
10. Extensions of the Real Business Cycle model: The real side

Readings

Long-term growth

Reference book: Aghion, Philippe and Howitt, Peter “The Economic of Growth”, MIT Press 2008

Business cycles

King, R., Plosser, C. and Rebelo, S. “Production, Growth and Business Cycles”, Journal of Monetary Economics, 1988, vol. 21, pp. 195-232

Lucas, R? “Understanding business cycles”, 1977, Journal of Political Economy, vol 83, n°6

Other references will be provided along the course

Microeconomics 1

Teacher : Maria Luisa Ratto (Université Paris-Dauphine, LEDa & PSL)

Course load: 36 (12 sessions of 3h)

ECTS: 6

Status: Mandatory

Prerequisites

Mathematics & optimization (linear algebra and optimization problems)

Overview

This is an advanced microeconomics course. It will provide a formalized exposition of the optimal consumption and production decisions by consumers and firms, which determine the allocation of scarce resources. It will focus on a competitive economy, where agents are assumed to be price takers. The analysis will provide an understanding of how prices are determined by the interaction of decisions made by households and firms. The concepts and techniques developed in the course can be used to examine the behaviour of individuals in other economies, e.g. where the intervention of the state is required or in economies with other institutional frameworks (different market or informational structures), as it will be considered in the microeconomics course in the second semester.

Course Objectives

The objective of the course is to provide a comprehensive exposition of modern economic theory on the way consumers and firms make their consumption and production decisions in a competitive economy and on how prices are determined in the market (partial equilibrium). The strong interactions between markets will then be taken into account in the analysis of general equilibrium. Beginning at an intermediate level, the course will present a more formalized exposition of the concepts, preparing students for a more advanced doctoral course.

Students will be provided with an intuitive understanding of the models' economic content, purpose and nature, as well as a clear account of the mathematics involved.

Course Schedule

1. The theory of the Consumer: The preference ordering. The feasible set. The consumption decision. The comparative statics of consumer behaviour. Offer curves and net demand curves.
2. Consumer Theory: duality. The expenditure function. The indirect utility function, Roy's identity and the Slutsky equation. Measuring the benefits of price changes. Composite commodities, separability and homotheticity Aggregation.
3. Production. The production function. Variations in scale. Variations in input proportions. The multiproduct case.
4. Cost. Long-run cost minimization. Short-run cost minimization. Cost minimization with several plants. Multiproduct cost functions.
5. Supply. Long-run profit maximization. Short-run profit maximization. The multiproduct firm. The profit function and comparative statics.
6. The theory of competitive markets. Short-run equilibrium. Stability of equilibrium. Long-run equilibrium.
7. General Equilibrium. Walrasian equilibrium of a competitive economy. Existence of Walrasian equilibrium. Stability of Walrasian equilibrium. Edgeworth of exchange theory. Exchange, equilibrium and the core.

8. Welfare Economics. Pareto efficient resource allocation. Welfare functions and the Pareto criterion. Pareto efficiency and competitive markets. Distribution and markets. Arrow's impossibility theorem.

Readings

Main textbooks:

Hugh Gravelle and Ray Rees, "Microeconomics", 2004, 3rd Edition, FT Prentice Hall
H. Varian, "Microeconomic Analysis", Norton & Company, Inc., 3rd edition, 1992

Other suggested readings :

R. Blundell. "Consumer behaviour: theory and empirical evidence – a survey, Economic Journal, 98, 1988, 16-65.
R.W. Shephard "Theory of Cost and Production Functions", Princeton University Press, Princeton, NJ, 1970, chs1-3.
D.G.Davis "A note on Marshallian vs Walrasian stability conditions", Canadian Journal of Economics and Political Science, 29, 1963.
P.A. Samuelson "Foundations of Economic Analysis", Harvard University Press, Harvard, 1948, part II.
K.J. Arrow and F.H. Hahn, "General Competitive Analysis", Oliver & Boyd, Edinburgh, 1971
G. Debreu, "Theory of Value", John Wiley, New York, 1959.
W. Hildenbrand and A. Kirman, "Introduction to equilibrium analysis, North-Holland, Amsterdam, 1976.
J. Quirk and R. Saposnick. Introduction to General Equilibrium Theory and Welfare Economics, McGraw-Hill, 1968.
A. Takayama, "Mathematical Economics", 2nd edn, Cambridge University Press, Cambridge, 1985.

Data Management and Programming

Teacher : Fabrice Rossi (Université Paris-Dauphine, CEREMADE)

Master 1, Semester 1

Course load: 36h

ECTS : 3

Status: Mandatory

Overview:

This course provides an introduction to programming and to data management, with a data-oriented point of view. The course can be divided in two parts. In the core course, the students will cover data management from data collection to data visual exploration, with a focus on tabular data and on relational data, using a data value chain paradigm. The programming part of the course introduces the fundamental aspects of imperative programming, as well as the concepts of oriented-object programming. Both techniques are needed in order to use Python and its data-oriented ecosystem efficiently. The two aspects of the course are tightly integrated: Each aspect of data management is illustrated by adapted programming constructs and uses specific data structures from Python. In addition, an introduction to computational complexity is provided and the scalability of all the methods presented in the course is assessed.

Prerequisites

Most of the course is self-contained but the students are expected to be familiar with all the mathematical tools associated to an economics curriculum: Linear algebra, calculus, continuous optimization, probability and statistics, all at an undergraduate level. A significant part of the examples of data manipulation from the course will make use of this mathematical knowledge. However, the course should be accessible even with only a cursory knowledge of most of the listed concepts.

Course Objectives:

The first objective of the course is to introduce the students to data-driven projects, by presenting the first steps of such projects from data collection to data visualization and exploration. Acknowledging the strong limitations of integrated software that rely solely (or mostly) on graphical user interfaces, the second major objective of the course is to provide all the programming knowledge and tools needed to implement all those data management steps, relying on Python language.

After having attended the classes, the students will be able to:

- specify a data management chain adapted to a data-driven project;
- identify the potential data value increase at the different steps of the chain;
- implement those steps in Python: Data collection (via e.g. scrapping), data cleaning, data storage, data aggregation and other requests, data visualization;
- more generally implement non-obvious data manipulation schemes in Python;
- assess the computational complexity of Python scripts

Semester 2, January to April

Macroeconomics 2

Teacher: Axelle Arquié (CEPII)

Course load: 36, 12 sessions, 3 hours per session

ECTS: 6

Status: Mandatory

Overview:

The course investigates monetary policy issues in two different contexts. First, in the follow-up of Macroeconomics I, we will study how to extend the NKPC model to nominal wage rigidity and unemployment issue. A second topics is devoted to the modelling of credit market frictions in the canonical model through the financial accelerator models.

Prerequisites

Macroeconomics 1, Mathematics and optimization; Statistics and Probability, Econometrics 1

Course Objectives:

The objective of the course is to deepen the modelling of the determinants of short-run fluctuations, by putting emphasis on the role of labour market frictions and financial frictions, and to study the relevant implications for monetary policy. After attending the classes, the students will have acquired a deep understanding of the workhorse New Keynesian model and how it can be used to tackle issues related to unemployment and financial frictions.

Microeconomics 2: Public Economics

Teacher: Gabrielle Fack (Université Paris-Dauphine, LEDa & PSL) and Sidartha Gordon (Université Paris-Dauphine, LEDa & PSL)

Course load: 36 hours, 12 sessions, 3 hours each

ECTS: 6

Status: Mandatory

Overview

The aim of the course is to present the basic principles of public economics, showing the link between theoretical analysis and public policy applications in practice. The course will provide:

- An overview of public economic analysis' main tools,
- A presentation of the main market failures and a discussion of government intervention,
- An introduction to taxation
- A presentation of social insurance and redistribution programs

Theoretical concepts will be presented along with empirical evidence. Particular emphasis will be put on the recent empirical advances in public policy analysis.

Prerequisites

Microeconomics 1, Statistics and probability, basic knowledge in econometrics

Course Objectives:

After having attended the class, the students should master the analytical tools and empirical methods to analyze the main market failures and the policies implemented to address them. They should also understand the fundamental trade-off between redistribution and efficiency and the challenges posed by the design of a tax/benefit system.

Course Schedule

Part I. Introduction and Tools for welfare analysis

Part II. Market failures

2.1 Information failures / Asymmetric information

2.2 Externalities

2.3 Public goods

Part III Taxation and Redistribution

3.1 Tax incidence: Who pays taxes?

3.2 Analysis of distortions caused by taxation

3.3 Income taxation and redistribution

Readings

A detailed syllabus will be given for each topic. Recommended general textbooks are:

An introduction to Public Economics (undergraduate textbook):

- Gruber, J. Public Finance and Public Policy, Worth Publishers, 3rd Edition, 2010

Theory:

- Atkinson, A. and J. E. Stiglitz (1980). Lectures on Public Economics, McGraw-Hill.
- Auerbach, A. J. and M. Feldstein (eds.), Handbook of Public Economics, vol. 1 (1985), vol. 2 (1987), vol. 3 (2002), vol. 4 (2002), Elsevier, Amsterdam.
- Salanié, B. (2003). The Economics of Taxation, MIT Press, Cambridge.
- Mas Colell A., Whinston M. Green J. (1995). Microeconomic Theory, chapters 10, 11, 13 and 14.
- Jehle G. and Reny P. (2011), Advanced Microeconomic Theory, chapter 8.

Empirical Methods:

Angrist, J. and S. Pischke (2009). Mostly Harmless Econometrics: An Empiricist's Companion, Princeton University Press, Princeton.

Industrial organization

Teacher: Anna Creti (University Paris-Dauphine, LEDa & PSL) & Jérôme Mathis (University Paris-Dauphine, LEDa & PSL)

Course load: 36 hours, 12 sessions, 3 hours each

ECTS: 6

Status: Mandatory

Overview

The aim of the course is to provide a presentation of modern industrial organization that blends formal models with real-world applications and derives implications for firm strategy and competition policy.

Prerequisites

Microeconomics 1; Game Theory

Course Objectives:

The main objective of this course is to provide a comprehensive exposition of strategies chosen by firms with market power, how such firms adapt to different market environments, and how antitrust authorities can change these environments to induce specific firms behaviors.

Course Schedule

1. Static models of oligopoly
2. Quality and product differentiation
3. Tacit collusion
4. Asymmetric information (Static competition, Communication, Limit pricing)
5. Competition and Investment
6. Welfare Standards in Competition Policy
7. Vertical Integration
8. Price discrimination (I)
9. Price discrimination (II)
10. Risk and uncertainty
11. Asymmetric information: Moral Hazard
12. Asymmetric information: Adverse Selection

Readings

Paul Belleflamme and Martin Peitz (2015): "Industrial Organization: Markets and Strategies", Cambridge University Press.

Jean Tirole (1988): "The Theory of Industrial Organization", MIT Press.

Microeconometrics

Teacher: Olivia Bertelli (University Paris-Dauphine, LEDa & PSL) and Eric Bonsang (University Paris-Dauphine, LEDa & PSL)

Course load: 36 hours, 12 sessions, 3 hours each

ECTS: 6

Status: Mandatory

Overview

This course focuses on micro-econometrics techniques based on temporal data (cross-sectional and panel) and qualitative dependent variables. The first part will explore possible sources of OLS bias and discuss techniques and estimators to address those biases (instrumental variable estimator and micro-econometrics techniques for temporal data, such as first difference, random effects, fixed effects and difference-in-differences estimators). Non-linear models (Probit, Logit models), as well as selection models (Tobit, Heckman selection models) will be the focus of the second part of the course.

The main themes are presented under a theoretical perspective, accompanied by empirical applications on Stata.

Prerequisites

Statistics and Probability, statistical inference, hypothesis testing, OLS with multiple variables

Course Objectives:

The objective of the course is to allow students to acquire theoretical and applied knowledge about the range of estimators, their estimation and causal inference applicable to probability models and temporal data.

After having attended the course, the students will master the main micro-econometrics techniques for probability models and temporal data and they will be able to critically analyze applied work that employs these types of estimators.

Course Schedule

The course will be organized in 7 chapters

1. Temporal models (AR)
2. Panel models (random effects, fixed effects)
3. Non-experimental evaluation of public policies with temporal data (difference-in-differences, propensity score matching with DID)
4. Introduction to instrumental variables method
5. Linear probability models
6. Models with qualitative dependent variable (Probit, Logit, ordered probit, multinomial logit)
7. Selection models (Tobit, Heckman)

Readings

Selected chapters from:

1. Wooldridge, J. (2002) "Econometric analysis of cross-section and panel data", MIT Press, Cambridge.
2. A. Colin Cameron and Pravin K. Trivedi (2005), "Microeconometrics: Methods and Applications", Cambridge University Press
3. Dormont, B. (2007) "Introduction à l'économétrie", 2ème édition ECO Montchrestien
4. Crémont et Jacquemet (2001) « Econométrie : méthode et applications », de Boeck Supérieur

Verbeek, M. (2017). A guide to modern econometrics, 5th Edition, Wiley

Course evaluation

Students will be evaluated in two steps. The first evaluation is based on the replication master. Students will present in pairs a scientific paper among a list provided by the teachers. This will be the same paper to be replicated for the Database and Stata Programming course. The presentation will count for 30% of the final note. The rest of the note will be based on a final written exam scheduled in the exams' week.

Course material

- List of scientific papers for students' presentations will be provided at the beginning of the course.
- Selected chapters from econometrics textbooks (see above)
- All slides, datasets, papers and other materials will be available on the MyCourse webpage.

Database and Stata Programming

Teacher: Olivia Bertelli (University Paris-Dauphine, LEDa & PSL) and Eric Bonsang (University Paris-Dauphine, LEDa & PSL)

Course load: 18 hours, 12 sessions of 1.5 hours each

ECTS : 3
Status: Mandatory

Overview:

The course presents the Stata coding language for applying micro-econometrics techniques. In the first part of the course, the main Stata features are explained by focusing on the estimation of econometric models with qualitative variables and selection models. In the second part of the course, students will learn how to analyse temporal and panel data with Stata and how to estimate temporal models, such as random effects, fixed effects and double differences. Moreover, the course will provide students with the appropriate knowledge for reproducing their econometric analyses in a professional format.

Prerequisites

Statistics and Probability

Course Objectives:

The main objective of this course is to provide students with Stata coding skills for describing and analysing cross-sectional and panel data and for estimating probability and temporal econometric models.

After having attended the classes, the students will be able to describe and analyze phenomena of interest contained in cross-sectional and panel datasets by using Stata. They will be able to conduct econometric analysis concerning probability and temporal models with graphs and tables formatted in a professional manner.

Course Schedule

1. Main commands in Stata
2. Estimation of probability models
3. Estimation of temporal models
4. Graphical analysis of data and econometric results
5. Replication of a research paper's results and critical analysis

Readings

Cameron, Adrian Colin, and Pravin K. Trivedi. Microeconometrics using stata. Vol. 2. College Station, TX: Stata press, 2010.

Gentzkow and Shapiro (2014) "Code and Data for the Social Sciences: A Practitioner's Guide."

Internet resources:

Stata video tutorials: <https://www.stata.com/links/video-tutorials/>

UCLA tips: <http://www.ats.ucla.edu/stata/>

Advanced Industrial Organization

Teacher: Anna Creti (Université Paris-Dauphine, LEda & PSL)

Course load: 21 hours, 7 sessions, 3 hours each

ECTS: 3

Language: English

Status: optional

Overview

The course on Advanced Industrial Organization is the follow-up of the basic theories and models developed in the Industrial Organization class. We shall first explore the relationships among firms in the specific context of procurement and regulation. We will then introduce social regulation (economic evaluations that can be used in assessing environmental controls, health and safety). We shall then analyze dynamic aspects of competition that represent critical issues in high technology and information technology industries: innovation and persistence of market dominance, network externalities and two-sided markets.

Prerequisites

Industrial Organization, Microeconomics

Course Objectives

Students will be guided to understand both the theoretical and the empirical aspects of modern advanced Industrial Organization. In complement to the Course of Industrial Organization, this course aims at covering most models of imperfect competition among firms to propose an analysis of various pricing strategies, marketing strategies and other strategic manipulations that characterize firms' behavior with market power.

After attending the classes, the students will have acquired a deep understanding of the advanced methods of quantitative industrial organization and game theory, to study the strategic interaction between firms and regulators, and dynamic competition models.

Course Schedule

1. Regulated Monopolies
2. Regulation under asymmetric information
3. Social regulation: environmental controls, health and safety
4. Innovation theories
5. Network externalities
6. Two sided markets

Readings

Tirole J., The theory of industrial organization (1988), MIT Press

Laffont, J. J., & Tirole, J. (1993). A theory of incentives in procurement and regulation. MIT press.

Viscusi, W. K., Harrington Jr, J. E., & Vernon, J. M. (2005). Economics of regulation and antitrust. MIT press.

Public Policy

Teacher: Eve Caroli (University Paris-Dauphine, LEDa & PSL) and Brigitte Dormont (University Paris Dauphine, LEDa & PSL)

Course load: 21 hours, 7 sessions, 3 hours each

ECTS: 3

Language: English

Status: optional

Overview:

The course investigates the question of public intervention from a microeconomic viewpoint,

by shedding light on two particular areas of public policy, the labor market and the health system.

In the first part, the course will cover the standard model of labour supply and labour demand as well as the equilibrium on the labour market and its policy implications.

The second part of the course will provide the basics in Health Economics: Structure of a health care system, health expenditure growth, role of ageing, demand for care and supply-induced demand, hospital regulation.

Prerequisites

Microeconomics, Undergraduate Econometrics

Course Objectives:

The objective of the course is to get students familiar with the basics of public policy intervention in two major areas: the labour market functioning and the health system organization.

After attending the course, the students will master the standard theories of labour supply and labour demand as well as the issues raised by their empirical analysis. They will also be able to analyse the equilibrium on the labour market and its implications. They will discover how health economics mixes several fields in economics to address the main health policy questions: microeconomics, industrial organization, public economics, equity and social choice.

Course Schedule

1. Labour supply
2. Labour demand
3. Labour market equilibrium
4. Structure of health care systems (section 1)
5. Structure of health care systems (sections 2 & 3)
6. Ageing and health expenditure growth
7. Demand for care and supply-induced demand

Readings

Tito Boeri and Jan Van Ours, *The Economics of Imperfect Labour Markets*, 2nd edition, Princeton University Press, 2013.

Pierre Cahuc, Stéphane Carcillo and André Zylberberg, 2014, *Labour Economics*, 2nd edition, MIT Press.

The Handbook of Health Economics, Culyer AJ, Newhouse JP (eds), North-Holland: Amsterdam, 2000

Health at a Glance, OECD 2019

Rebuilding the Health Insurance System, Dormont B., Geoffard P.-Y., Tirole J.. (2014), Les notes du Conseil d'Analyse Economique, n°12, April

Towards a More Efficient Health System, Philippe Askenazy, Brigitte Dormont, Pierre-Yves Geoffard and Valérie Paris, (2013) Les notes du Conseil d'Analyse Economique, No.8, July

International trade: Theory and Policy

Teacher: Joachim Jarreau (University Paris-Dauphine, LEDa & PSL)

ECTS: 3

Language: English

Status: optional

Overview

The course will focus on the most recent theories of trade which are relevant for research on and analysis of the determinants and impacts of globalization, trade patterns, and trade policy. A large part of recent research on trade has focused on firm heterogeneity and its consequences for the impacts of trade liberalization. The course will also introduce the gravity equation, its theoretical foundations, and its importance in applications to evaluate the impact of geography and trade costs on trade patterns. Finally the course will present political economy models of trade policy. Each section of the course will be partly devoted to empirical tests of the theories. Students will prepare presentations of recent research articles in relation to the course.

Prerequisites

Microeconomics (undergraduate level), undergraduate econometrics

Classical theories of trade based on comparative advantage: Ricardian theory, Heckscher-Ohlin model (undergraduate course on international trade).

Course Objectives:

The objective of the course is to become familiar with the more recent theories of trade, new gains from trade, and trade policy. The course will cover models of trade of differentiated products, starting with Krugman's model and covering Melitz's model with firm heterogeneity in detail. It then presents gravity models and their applications to the study of the impact of trade costs on trade patterns.

The last part of the course studies the impact of trade policy instruments (tariffs and non-tariff barriers) and introduces political economy models of trade, which aim to explain the formation of trade policy as a result of divergent domestic interests.

After having attended the classes, the students will be able to critically understand recent research on trade, which focuses on the impact of trade liberalization in settings with firm heterogeneity; on the role of geography and trade barriers on trade flows; and on the political economy of trade.

Course Schedule

1. Introduction. Monopolistic competition models: Krugman's (1979 and 1980) models.
2. Melitz's model of trade. The "new" gains from trade.
3. Exercises and applications on the Melitz model.
4. The gravity model: theoretical foundations. Empirical formulations.
5. Trade policy in practice: instruments, terms of trade effects, optimal tariff.
6. The political economy of trade: models of trade policy.
7. Article presentations: discussion of research articles.

Readings

P. Krugman, M. Obstfeld, M. Melitz, "International Economics: Theory and Policy"

Robert Feenstra, "Advanced International Trade: Theory and Evidence"

A list of research articles will be provided, which will be presented and discussed by students in class.