

## M1 APE SYLLABUS

### SEMESTER 1

FIELD: Economic history

TYPE COURSE: Compulsory

Introduction to Economic History

TEACHERS: T.PIKETTY

COURSE LOAD: 24h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

The objective of this course is to present an introduction to economic history, with special emphasis on the interaction between capital accumulation, the global distribution of income and wealth, and growth.

**Evaluation:**

To validate the course, students are required to attend and actively participate to all lectures; to take the exam

FIELD: Macroeconomics

TYPE COURSE: Compulsory

International Economics

TEACHERS: F. PAPPADA & T. VERDIER TUTORIAL TEACHERS: L. MARCHAL & B.VANNIER

COURSE LOAD: 24h TUTORIAL LOAD: 18h ECTS: 5

**Presentation:**

The course is in two parts: International Trade (T. Verdier) & International Macroeconomics (F. PAPPADA).

International Trade's part overview:

This course is devoted to the study of international trade issues. The objective is to introduce to the students at the first-year graduate level, the standard general equilibrium models used in international trade theory. It presents theories that explain the existence of trade between nations or regions and the specificities of these exchanges (inter-sectoral or intra sectoral trade

patterns). It also discusses the consequences of trade liberalisation from a normative perspective on the welfare of nations, the impact of trade flows on the income distribution and inequality within and between regions. Traditional theories of trade based on the concept of comparative advantage are examined, together with new explanations for international trade under imperfect competition. The role of trade policy (tariff and non-tariff barriers) and the associated gains and losses are discussed within the framework of these theories

- Lecture 1. Globalization: an Overview, Comparative Advantage and Gains from trade.
- Lecture 2. Ricardian Models of International Trade
- Lecture 3. The Heckscher-Ohlin Model of International Trade (I)
- Lecture 4. Generalizations of Heckscher Olhin Models (II)
- Lecture 5. Imperfect Competition, Trade and Firms
- Lecture 6. Trade Policy

International Macroeconomics's part overview:

This course is an introduction to open economy macroeconomics and international finance. The core objective of the course is to develop simple macroeconomic models of open economies that can be usefully applied to international economic phenomena. We will examine the balance of payments, the determination of exchange rates, and the effect of fiscal and monetary policies under fixed and floating exchange rate regimes.

The class will be structured around 5 blocks covered in class and during tutorials.

1. National accounting : the Balance of Payments
2. The transfer problem
3. The intertemporal view of the current account
4. Foreign Exchange Rate Markets, Arbitrage and Parity Conditions
5. Flexible Exchange Rates and Output in the Short Run
6. Fixed Exchange Rates

**Evaluation:**

Students have to choose between the two parts; they pass the exam and validate only one part but still for a total of 5 ECTS

**FIELD:** Macroeconomics

**TYPE COURSE:** Compulsory

**Macroeconomics 1**

**TEACHERS:** J.O. HAIRAULT & T. BROER **TUTORIAL TEACHER:** E. JUNG

**COURSE LOAD:** 36h **TUTORIAL LOAD:** 24h **ECTS:** 6

**Presentation:**

This course introduces students to the standard framework of dynamic macroeconomic analysis, built on the neoclassical growth model. After a presentation of the main macro facts, the course introduces the growth model.

An application to climate change follows, in the form of “Integrated Assessment Models”.

Shocks are then introduced in the standard model to study business cycles.

The last part looks at monetary policy in a version of the model with nominal rigidities, including simple heterogeneous agent New Keynesian(HANK) models.

The course finishes with a critical discussion of the approach, and other extensions.

**Evaluation:**

50% Midterm, 50% Final exam

**FIELD:** Microeconomics

**TYPE COURSE:** Compulsory

**Game theory**

**TEACHERS:** O. COMPTE **TUTORIAL TEACHER:** J. GRIMEE

**COURSE LOAD:** 24h **TUTORIAL LOAD:** 18h **ECTS:** 5

**Presentation:**

Game Theory aims at analyzing strategic situations, that is, situations in which the payoff of an agent may depend on the actions of other agents. Examples of strategic situations are situations of conflict, cooperation, coordination, information transmission or manipulation. Game theory has applications in several fields, such as economics, politics, law and biology. In this course, we will introduce the basic tools of game theory, and some of the main applications of game theory will be outlined. Warning: we will solve many games in class and T.D. Yet, solving exercises on your

own is key to understanding the concepts. Do not wait for the final exam for that... Recommended books: - R. Gibbons. "Game theory for applied economists" - M. Osborne and A. Rubinstein. "A course in Game theory" - R. Myerson. "Analysis of Conflict"

**Evaluation:** Final Exam: 50%, Midterm: 30%, Tutorial Grade: 10%, Participation Tutorial: 5%, Presence course: 5%

**FIELD:** Microeconomics

**TYPE COURSE:** Compulsory

Microeconomics 1

**TEACHERS:** P.Y. GEOFFARD & M. LEDUC **TUTORIAL TEACHER:** C. LIQUI LUNG

**COURSE LOAD:** 36h **TUTORIAL LOAD:** 24h **ECTS:** 6

**Presentation:**

Through this course, students will learn basic concepts of microeconomics such as constraints, consumer theory, aggregate demand, production and equilibrium

**Evaluation:**

50% Final exam, 30% Midterm, 20% participation and homework

**FIELD:** Quantitative Methods

**TYPE COURSE:** Compulsory

Econometrics 1: Linear Econometrics

**TEACHERS:** N. JACQUEMET **TUTORIAL TEACHER:** L. GOURSAT

**COURSE LOAD:** 24h **TUTORIAL LOAD:** 18h **ECTS:** 5

**Presentation:**

Prerequisites:

Probability and statistics, linear algebra

Finite sample properties of OLS / Testing under the normality assumption. See Magnus (2017).

Introduction to the Theory of Econometrics, V.U. Press. Outline:

- 1. Introduction. What econometrics is about / The inference problem / Reminder of finite sample OLS properties.
- 2. Statistical inference. Reminder on asymptotic theory (Law of Large Numbers, The Central Limit Theorem) / Asymptotics of OLS.



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- 3. Non-Spherical disturbances. Heteroscedasticity, Clustering, Autocorrelation, Testing procedures (Breush-Pagan, Durbin-Watson, White).
- 4. Identification Issues in the Linear Model. Omitted variable bias, Measurement error bias, Functional form misspecification.
- 5. Instrumental variable estimation. IV estimator, exclusion restriction, Consistency of the IV estimator, Hausman test, Sargan test. The Rubin model, difference estimators.

**Evaluation:**

(10%) Homework assignment: distributed during the second tutorial, due at the end of the semester.

(40%) Closed book mid-term exam, during the tutorial. (50%) Closed book written exam.

FIELD: Quantitative Methods

TYPE COURSE: Elective

Mathematics and Statistics for Economic Analysis

TEACHERS: J. GIGNOUX      TUTORIAL TEACHER: n/a

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS:

**Presentation:**

This course aims at providing students with both an understanding and some practice of the core techniques of Statistics and Mathematics for economists, the command of which is necessary for subsequent courses in Econometrics and economic analysis. The course has two parts. The Mathematics part covers the core methods for static (including the resolution of the Lagrange and nonlinear programming problems) and dynamic optimization methods (using the maximum principle primarily) and includes a chapter on the resolution of differential equations. The Statistics part begins with the properties of random samples (including normal samples and convergence concepts), before turning to point estimation and hypothesis testing (using the maximum likelihood approach primarily).

**Evaluation:**

n/a

FIELD: Quantitative Methods

TYPE COURSE: Tutorial

R Practice Class

TEACHERS: H.BULL

**COURSE LOAD: 8h TUTORIAL LOAD: n/a ECTS:**

**Presentation:**

The aim of this class is to gain basic knowledge of R, a software for statistical and econometric analysis.

**Evaluation:**

n/a

**FIELD: Macroeconomics**

**TYPE COURSE: Compulsory**

**Macroeconomics 2 : Macroeconometrics**

**TEACHERS: D.COHEN , G. SAINT-PAUL TUTORIAL TEACHERS : T .ZUBER, L . BOCQUET**

**COURSE LOAD: 36h TUTORIAL LOAD: 24h ECTS: 6**

**Presentation:**

Part I - Daniel Cohen

TA -- Thomas Zuber

An advanced introduction to the theories of growth, disequilibrium and imperfections. The course will discuss the topics of Ramsey model, time inconsistency; define the purpose and the efficiency of fiscal and monetary policies; study the mechanics of sovereign debt, and finally discuss the interests and limits of endogenous growth models.

Part II - Gilles Saint-Paul

TA -- Léonard Bocquet

This part of the course will be an introduction to the theory of frictional labor and credit markets.

**Evaluation:**

10% of the final grade will be based on class participation and 45% on written evaluations for each part of the the course (including mid-term, homeworks and final)

**FIELD: Microeconomics**

**TYPE COURSE: Compulsory**

**Microeconomics 2: Market Equilibrium and Market Failures**

TEACHERS: F.BLOCH , B .CAILLAUD TUTORIAL TEACHER : B .BLUMENTHAL

COURSE LOAD: 36h TUTORIAL LOAD: 24h ECTS: 6

**Presentation:**

The fundamental welfare theorems establish the perfectly competitive case as a benchmark for thinking about outcomes in market economies. In particular, any inefficiencies that arise in a market economy, and hence any role for Pareto-improving market intervention, must be traceable to a violation of at least one of the building assumptions of the perfectly competitive case. The analysis of these market failures is the topic of this course.

The course consists in three parts. The first part covers classical market failures without informational concerns: market power, externalities and public goods. It introduces basic results and serves as an introduction to any further course in public economics and in industrial organization.

The second part is devoted to the study of informational imperfections and asymmetries as a source of inefficiencies. Starting from the failure of the competitive equilibrium paradigm in a context of informational asymmetries, it first presents central models of transaction under asymmetric information, the so-called Principal - Agent models. Moving to interactive situations with multiple agents, the course then provides an introduction to mechanism design, with applications to auctions and public good provision.

The third and last part adopts the point of view of a policy maker engaged in the design and implementation of collective decisions. The course reviews social choice theory, in particular the possibility of deriving the objectives of the policy maker as an aggregation of the preferences of the agents. Classical impossibility theorems are studied (Arrow, Gibbard-Satterthwaite) and positive results are discussed, e.g. in the context of voting. Finally, since the policy maker rarely knows individuals' preferences, the theory of implementation is presented, making the link with the previous part on mechanism design.

**Evaluation:**

The final grade for the course will consist in the weighted average of:

- A grade for the four homework assignments and for participation in the main lectures and the tutorials (20%)
- a grade for the 2h midterm exam (30%)
- a grade for the final 3h exam (50%)

FIELD: Quantitative Methods

TYPE COURSE: Compulsory

Econometrics 2: Macroeconometrics

TEACHERS: M. BEN SALEM, C. DOZ

COURSE LOAD: 36h TUTORIAL LOAD: 24h ECTS: 6 TUTORIAL TEACHERS: R. FAQUET, F. JACQUETIN, A. MARRAKCHI

**Presentation:**

This course is devoted to stationary time series analysis. The main problems which can be encountered in econometric modeling with macroeconomic time series will be first introduced, and practical examples will be given. Then, all the basic notions concerning time series will be addressed in a univariate framework. Formal examples as well as practical illustration on real macroeconomic data will be given. Finally, the course ends by an introduction to the multivariate framework.

The outline of the course is the following:

- Econometric modeling with macroeconomic time series : general issues concerning autocorrelation and non-stationarity.
- Univariate stationary processes, ARMA processes, innovations process, Wold representation, forecasting
- Univariate non stationary processes and unit root tests
- Multivariate processes and stationary VAR processes.
- Short introduction to unobserved component models and Kalman filter (only if there is enough time)

**Evaluation:**

There will be a final written exam, which will count for 50% of the grade. 25% of the final grade will be provided by homework and the remaining 25% by a mid-term exam.

FIELD: Quantitative Methods

TYPE COURSE: Compulsory

Econometrics 3: Discrete Models and Panel

TEACHERS: L. BEHAGHEL, P.KETZ TUTORIAL TEACHER : Y. HAZARD

COURSE LOAD: 36h TUTORIAL LOAD: 24h ECTS: 6

**Presentation:**

The course covers four broad topics.

After a summary of the traditional approach to causality in cross-sectional linear models (lecture 1), lectures 2-6 present the "treatment effect" or "program evaluation" approach to causality. In lecture



2, we present the treatment effect model, also known as Rubin's model, that is the common framework used in this approach, and apply it to the analysis of randomized controlled experiments. In lecture 3, we cover advanced issues with instrumental variables, and their use to analyze quasi-experiments. In lecture 4, we analyze regression discontinuity designs. In lecture 5, we cover matching estimators, and in lecture 6, synthetic controls.

Lectures 7 and 8 deals with panel data. We consider them from two perspectives: endogeneity and dynamics. One advantage of panel data over cross-sections is indeed to offer new ways to deal with endogeneity. We present simple models that account for the presence of permanent differences across units (individual effects, lecture 7). We then discuss how instrumental variables can be used in that context. To that end, we introduce a general class of estimator that uses the "generalized method of moments" (GMM) (lecture 8).

Lectures 9-12 cover Maximum Likelihood (ML) estimation and its main applications in applied economics. First, the concept of ML is introduced together with its large sample justification [lecture 9]. Then, we discuss several models which are frequently used in economics and estimated by means of ML [lecture 10-11]. A broad class of models is given by limited dependent variable models. A prominent example is the binary choice model. In this context, we contrast ML estimation with linear regression models that ignore the nature of the binary choice variable. Other examples of limited dependent variable models are (multivariate) discrete choice, censored regression, and duration models. We discuss estimation of these models along with several testing problems of interest, such as model specification. Furthermore, we discuss how ML estimation can be used in the context of sample selection issues, that is when the estimation sample is not representative of the population of interest [lecture 11]. In addition, we discuss alternative, less "parametric" solutions to the problem of sample selection. Last, we discuss an empirical application to illustrate the usage of some of the newly introduced estimation methods used in practice [lecture 12].

**Evaluation:**

50% final exam (about equally split between lectures 1-8 and 9-12)

20% mid-term exams (on lectures 1-6)

30% tutorials (randomly chosen questions from problem sets + class participation)

**FIELD:** Social Sciences

**TYPE COURSE:** Compulsory

**Optional Seminar**

**COURSE LOAD:** 24h **TUTORIAL LOAD:** n/a **ECTS:** 3

**Presentation:**

Students must follow in M1 APE an optional course outside the Economics field at one of our partner institutions – EHESS/Paris 1/ENS

**FIELD:** Optional Seminar

**TYPE COURSE:** Elective

**Development economics**

**TEACHERS:** D. COGNEAU, S.LAMBERT, O.VANDEN EYNDE

**COURSE LOAD:** 18h **TUTORIAL LOAD:** n/a **ECTS:** 3

**Presentation:**

This lecture offers an introduction to contemporary research in development economics, emphasizing approaches that can be quite diverse but share the same concern for establishing empirical facts. It aims at providing a first contact with recent research papers.

The course is organized around the 6 following topics:

1. What is development
2. History of development
3. Poor Economics
4. Agriculture
5. Democracy
6. Infrastructure and service provision.

**Evaluation:**

Open book exam

**FIELD:** Optional Seminar

**TYPE COURSE:** Elective

**Environmental Policies**

**TEACHERS:** M. FODHA, F.HENRIET, H.OLLIVIER

**COURSE LOAD:** 18h **TUTORIAL LOAD:** n/a **ECTS:** 3

**Presentation:**

The course will focus on the issues of sustainable development, the environment and natural resources. The objective is to present the foundations and main results of economic analysis of environmental policies.

The course will start with a brief presentation of facts and data, and will give a descriptive approach of the evolution of climate change, water quality, forests, fisheries, resources and pollution.

In a second step, the course will present the fundamentals of public economics, mainly based on “public goods” and “externalities”. The rest of the course will study the environmental policy instruments (theoretical framework and applied issues), and the links between international trade and the environment.

**Evaluation:**

Final report

FIELD: Optional Seminar

TYPE COURSE: Elective

Industrial Organization

TEACHER: P.GAGNEPAIN

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

This class will develop the main empirical methods used in industrial organization. In particular, we will focus on the tools used to identify firms’ conduct and shed light on the nature of competition, quantify the damages of a cartel or those faced in the case of an abuse of dominant position; we will learn as well to simulate the economic consequences of a merger between firms. We will focus on the strategies used by firms to deter (or accommodate) entry of potential competitors. Finally, we will discuss potential pricing inefficiency in vertically related markets which arise from the so-called double marginalization problem. Special emphasis will be given in this course to the construction of each empirical model that will be tested with data.

**Evaluation:**

Final exam

FIELD: Optional Seminar

TYPE COURSE: Elective

Labor Economics

TEACHERS: T BREDA , F. FONTAINE

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

This course is structured around some of the main topics in modern labor economics. It introduces selected recent research questions together with the theoretical and empirical tools needed to address them.

1. Firms' labor market power\*
2. Unemployment insurance and redistribution\*
3. Globalization/trade and unemployment and/or inequality
4. Labor unions and inequality (within and between firms)\*\*
5. The effects of codetermination\*\*
6. Effects of wage transparency
7. Social networks and job search\*
8. Consequences of Implicit biases (measured with the IAT)
9. Consequences of early parental investments

**Evaluation:**

Oral presentations

FIELD: Optional Seminar

TYPE COURSE: Elective

Macroeconomic Policies

TEACHERS: BENASSY-QUERE Agnès

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

The aim of the Economic policy course is to teach how to identify the relevant theoretical and economic knowledge for a given macroeconomic policy issue, and how to use it. The students are required to master the basic, undergraduate knowledge in macroeconomics, monetary economics, microeconomics, international trade and finance. After discussing how economic policy can be modelled, how it can be positioned relative to the decision-making process and what its limits are, the course will cover 3 policy areas: fiscal, monetary and financial.

**Evaluation:**

The validation of the course goes through a final exam, active participation in class, and the drafting of a 2-pages policy note on a specific topic to be agreed upon. The note will need to explicitly rely on at least 2 research papers published in academic journals. Addressed to a specific policy-maker (e.g.

Finance minister of a country), it will provide a recommendation to be precisely documented, with appropriate data. The bibliography will be provided in appendix (3rd page). Each note will be written by a group of 2-3 students.

## M2 PPD SYLLABUS

### SEMESTER 1

**FIELD:** Development

**TYPE COURSE:** Core course

Development economics

**TEACHERS:** S. LAMBERT, A. SUWA-EISENMANN

**COURSE LOAD:** 36h **TUTORIAL LOAD:** n/a **ECTS:** 6

#### **Presentation:**

This course aims at giving a set of general knowledge in development economics and at surveying the foundation of current research in the field. At the end of this course, students will have acquired factual knowledge of development issues, mastering of analytical tools and understanding of specific empirical challenges. Students are required to master the main notions of micro and macroeconomics, international trade as well as econometrics.

#### **Evaluation:**

There will be a compulsory reading for each lecture. A question about the paper will be given in advance.

-In each lecture, we'll dedicate time to discuss this question. Participation to the discussion is rewarded with bonus points added to the final grade.

-Twice (once per part) the question will have to be answered in written at the beginning of the lecture. This will have to be done within 10 minutes. Whether the question will have to be answered in written will be announced on the spot. The corresponding grades will contribute to the final grade with a coefficient 0.5 each.

The final exam is a 2 hours written exam, with documents and computer allowed. Coeff 3.

**FIELD:** Economic and Social History

**TYPE COURSE:** Core course

## Advanced Economic History

TEACHERS: F. ALVAREDO, J. BOURDIEU, D. COGNEAU, P.C. HAUTCOEUR, L. KESZTENBAUM, E. MONNET, T. PIKETTY

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

### **Presentation:**

This Advanced Economic History is the core course of the Economic History topic and, as such, is highly recommended for students wishing to specialize in economic history and related subjects. This is a collective course designed and taught by members of the Centre d'histoire économique et sociale François-Simiand. It aims at presenting the state of the field using examples and topics from various research areas in economic history. The course is jointly taught by Facundo Alvaredo, Jérôme Bourdieu, Denis Cogneau, Pierre-Cyrille Hautcoeur, Lionel Kesztenbaum, Eric Monnet, and Thomas Piketty.

Although this is not a formal prerequisite, it is assumed that students have already taken the "Introduction to Economic History" course and are familiar with the basic facts regarding the historical evolution of income and wealth, the changing composition of capital ownership, etc. Students who have not taken this course (or need to refresh their memory) are strongly encouraged to go through the syllabus and slides used in this course.

Advanced Economic History is organized in 12 lectures of 3 hours. To validate the course, students are required to attend and actively participate to all lectures. The main evaluation relies on two written evaluations of some of the papers studied during the course, in the format of a referee's report. In practical terms, it means each student will have to choose two papers among those proposed (either in the mandatory reading section or in a specific session), given that: a/ the two papers must be related to two different teachers; and b/ there is a fixed limit to the number of students who can choose the same teacher (more or less ten students per teacher, the exact number will obviously be adjusted to fit the total number of students). The papers will be served on a "first come first serve basis", meaning that once all the slots for a teacher have been filled, the paper he proposes cannot be chosen any more.

Each session is focused on one topic in economic history and discusses that topic in length. In each case, there are two 'mandatory paper' –reference papers on the topic– and various 'advanced readings' for those more interested by these topics. At the very least reading the 'mandatory paper' in each session is necessary/useful to follow the course. In addition, these two papers will be used for the exam. For those who want to go further there is an additional list with the main references on each topic, which form the basis of the talk.

### **Evaluation:**

To validate the course, students are required (1) to attend and actively participate to all lectures; (2) to take the exam.

FIELD: Economic Theory

TYPE COURSE: Core course

Behavioral economics and bounds on rationality

TEACHERS: O. COMPTE, P. JEHIEL

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

**Presentation:**

PART I (Jehiel)

The modern approach to solution concepts in games is by a learning story. Players may have wrong expectations (either about the opponent's play or about the assessment of their own strategy) to start with, but as experience accumulates expectations should get closer to the truth: if behaviors stabilize they should correspond to an equilibrium play. However, this view (at least applied in a strict sense) seems less plausible in complex games. Think of chess. Predicting what the opponent will do in more than a few steps ahead is impractical. Knowing or learning the value of a board position is impossible (for most positions), even for the best chess players. Such simple considerations suggest the need to develop models of bounded rationality, which may next be used to approach a number of economic interactions in a new way. The objective of the course is to stimulate new research in game theory and applications that maintains the game theoretic tradition of high logical standards while incorporating elements of bounded rationality/behavioral economics in the analysis. Various approaches to behavioral economics and bounded rationality are discussed in the course.

Part II (Compte)

The objective of the class is to take a critical journey across economic theory (decision theory under uncertainty, auctions, repeated games, reputation, information transmission...). Our models generally assume that agents know with precision the environment they face, or the exact distributions over the parameters that the analyst assumes. This places strong cognitive demands on agents, or it gives agents extraordinary powers of discernment. Our aim will be to identify these cognitive demands, highlight how our intuitions are shaped by (and sometimes hinge on) these demands, and suggest alternative models that assume lesser sophistication on agents. Along the way, we shall also review how the path proposed, based on direct strategy restrictions, compete with other methods for limiting the rationality of economic agents

**Evaluation:**

PJ Written exam OC Report

FIELD: Economic Theory

TYPE COURSE: Core course

Information, design and market

TEACHERS: O. TERCIEUX, L. LAMY

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

**Presentation:**

Market design seeks to offer practical solutions to various resource allocation problems. The field has recently enjoyed successes in applying economics tools and insights to improve the methods for organizing professional labor markets such as those for teachers or medical interns, for assigning students to public schools, for the allocation of social housing, for exchanging kidney donors with medical incompatibilities among transplant patients, for allocating government resources such as the spectrum (the FCC auctions in US and auctions for mobile phone licenses) or the advertising slots on internet (Google and Yahoo!'s keyword auctions). The general goal of market design consists not only in analyzing markets for the assignment of these “items”, but also in designing those markets and proposing new solutions in particular ones to use new computational technologies (combinatorial auctions are used in energy markets).

**Evaluation:**

Final exam (to be confirmed)

FIELD: Economic Theory

TYPE COURSE: Core course

Networks Economics

TEACHERS: F. BLOCH, M. COMOLA, G. DEMANGE

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

**Presentation:**

Two parts:

A) G. Demange :

The first part of the course introduces the basic concepts for analyzing networks: statistics, values to positions. Then it analyzes games on networks. studies models of learning and diffusion in networks, and presents the economic approaches to network formation based on game theory to model incentives to form links. The second part will present numerous applications and recent empirical works to illustrate the approach.



B) M. Comola and F. Bloch:

The aim of the second part of the course is to discuss recent topics in network economics. The course will be articulated in two blocks:

- 1) Block A: Empirical Methods [Margherita Comola]
- 2) Block B: Social Networks in Development Economics [Francis Bloch]

**Evaluation:**

The grade for Part I will be composed of several homework (1/3), attendance and participation (1/3), a written exam (1/3).

The grade for Part II will be composed of an oral presentation, in pairs (50% of the grade) and an individual referee report (50% of the grade).

**FIELD: Economics of Human Behavior**

**TYPE COURSE: Core course**

**Welfare Economics and Applications**

**TEACHERS: F. DIETRICH, M. FLEURBAEY, G. PONTIERE, S. ZUBER**

**COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6**

**Presentation:**

This Economic analysis of allocations and policies walks on two legs: efficiency and equity. It is important that economic experts incorporate the considerations that are relevant to the users of their evaluations and do not smuggle in special views and biases in an opaque way. Witness the quarrel between Nordhaus and Stern on the discount rate for the assessment of climate change mitigation. Nordhaus accused Stern of British imperialism and “Government-house utilitarianism” and claimed that his own approach was more democratic.

In this course we present how evaluation criteria are undergoing important changes, in particular under the influence of recent theories of justice, and can now better assess the efficiency and equity components of allocations and policies. And we illustrate how this gets applied in various domains of policy and social analysis (risk, inequalities, health, income tax, well-being indicators, climate). This course is at the intersection of social choice theory, welfare economics, public economics, game theory, and political economy. This course is addressed to all students planning to work on policy topics, and also introduces to open research questions.

**Evaluation:**

Grading will rely on a final essay (around 5,000 words) for 70% and participation for 30%.

FIELD: Globalization, Political Economy, Trade

TYPE COURSE: Core course

Political Economy : Conflict, Institutions, media and Governance

TEACHERS: O. VANDEN EYNDE, E. ZHURAVSKAYA

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

**Presentation:**

Two parts :

A) ZHURAVSKAYA E.

1. Political accountability. Political institutions within countries: elections vs. appointments and term limits
2. Media as an institution of political accountability. Media as an instrument of political Persuasion
3. Understanding regulation and corruption
4. The Value and the Cost of Political Connections
5. Economic Effects of Constitutions

B) VANDEN EYNDE O.

This part of the course introduces students to the recent literature on conflict and economic development. The course discusses a limited set of academic articles in depth. Students are expected to read these articles before each lecture

**Evaluation:**

2 home assignments containing questions and replication exercises, one for each part of the course (50% of the final grade each) and final exam (50% of the final grade)

FIELD: Labor and Public Economics

TYPE COURSE: Core course

Advanced Microeconometrics

TEACHERS: F. LIBOIS, D. MARGOLIS

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

**Presentation:**

DAVID MARGOLIS PART:

This class will present tools and themes in microeconometrics, insisting on the intuition (but not avoiding the math). We will only deal with frequentist (not Bayesian) econometrics.

- 1) Models, DGPs and Estimation: Loss functions, estimator properties
- 2) Quantile regression
- 3) Specification: testing, cross-validation, endogeneity, unobserved heterogeneity
- 4) Panel data techniques: multi-level static and dynamic models
- 5) Alternative specifications for statistical distributions and duration models
- 6) Semi- and Non-parametric methods (Kaplan-Meier, cox partial hazards, kernel density estimation, non-parametric and local regression)
- 7) Numerical methods: simulation, bootstrap

**F. LIBOIS PART:**

- 1) Robust statistics: introduction and basic concepts Quantile regression
- 2) Robust statistics: univariate robust statistics
- 3) Robust statistics: robust boxplots
- 4) Robust linear regression

**Evaluation:**

DM: Report

LB: Report (or final exam)

**FIELD:** Labor and Public Economics

**TYPE COURSE:** Core course

Economics of education

**TEACHERS:** L. BEHAGHEL, J. GRENET, M.GURGAND

**COURSE LOAD:** 36h **TUTORIAL LOAD:** n/a **ECTS:** 6

**Presentation:**

This course provides an introduction to the economic analysis (both theoretical and empirical) of the investment in and provision of education. The theoretical background that explains individual and public investment in education is reviewed and linked to empirical evidence. One important application is the analysis of the returns to education both at the micro and macro level. The course will also analyze the production and provision of education. Examples are the importance of inputs such as teachers and class size, the role of incentives and the analysis of peer effects. Each course will

consist of a general introduction by the instructors, followed by one or two presentations of papers by students taken from starred (\*) papers in the reading list.

**Evaluation:**

Based on presentations (25%) and an exam (75%).

**FIELD:** Labor and Public Economics

**TYPE COURSE:** Core course

Health behavior, health inequalities/Health Economics

**TEACHERS:** P.Y.GEOFFARD, L. ROCHAIX

**COURSE LOAD:** 36h **TUTORIAL LOAD:** n/a **ECTS:** 6

**Presentation:**

This course aims at presenting the range of issues addressed in health economics, from efficiency to equity, from individual choices to public decision, from microeconomic decisions to global health. It analyses how the markets for health services differ from others, with an emphasis on market failures and the role of health policy. Key health economic concepts are presented, such as the demand for health and health care, insurance, optimal provider payments, or innovation. One of the strong underlying questions in this course is to examine the role of the market for the provision of health and health services and the ways in which public policy can influence these markets. Another is the comparison between developed and developing countries' challenges. A third underlying question is to assess the potential of recent methodological developments in enhancing economists' understanding of individual behaviors and their determinants, based on recent developments in behavioral economics. The course will also include a short presentation of socio-economic calculus applied to healthcare.

Sessions will include formal lectures with interactions with students. For some of the sessions, post-doctoral or doctoral students as well as researchers at PSE will be invited to participate.

**Evaluation:**

The evaluation for the L. Rochaix part will be based on the following assignments:

- E1: An oral individual presentation of a recent technical paper related to class content (25% of final mark);
- E2: A written essay, based on this oral presentation but including comments made during the presentation (25% of final mark);
- E3: A short exam (90 minutes) on course content (50% of final mark) – January 2020.

The evaluation for the PY. Geoffard: to be confirmed

**FIELD:** Labor and Public Economics

**TYPE COURSE:** Core course

**Labor Economics**

**TEACHERS:** A. CLARK, F. FONTAINE, F. LANGOT, D. MARGOLIS

**COURSE LOAD:** 36h **TUTORIAL LOAD:** n/a **ECTS:** 6

**Presentation:**

This class covers both the micro and macro aspects of labor economics. David Margolis begins by reviewing and extending microeconomic models of labor demand and labor supply and discussing how policies can shift equilibrium outcomes in noncompetitive labor markets along multiple dimensions. Andrew Clark further discusses deviations from equilibrium and implications for policy. François Fontaine will then bridge the micro and the macro levels using search and matching models and their empirical applications. The last part of the course with François Langot is devoted labor market institutions and public policies such as tax and pension reform and unemployment insurance.

**Evaluation:** Written exam and a homework

**FIELD:** Labor and Public Economics

**TYPE COURSE:** Core course

**Labor economics and Social Policy**

**TEACHERS:** T. BREDA, E. MAURIN

**COURSE LOAD:** 36 h **TUTORIAL LOAD:** n/a **ECTS:** 6

**Presentation:**

This course is in two parts:

E. Maurin (24 hours, taught in French): Social Interactions and Public Policy

T. Breda (12 hours): Selected topics in Labor economics

Students need to validate both parts of the course, which will bring them 6 ECTS.

La première partie de ce cours avancé (Eric Maurin) est dispensé en français. Il traite des problèmes posés par l'identification empirique des effets de contexte ainsi que des difficultés à évaluer les politiques publiques en présence d'effets de contexte. Le cours s'appuie sur la présentation de nombreux travaux récents en économie de l'éducation et en économie du travail.

The second part of the class is taught in English. It reviews some key issues related to labor markets:

- theories and measures of discrimination,

- women in the labor market;
- why do wage inequalities have increased?
- Are wages shaped by market clearing or trade unions and collective bargaining?
- (if time permits) what are the effects of the minimum wage?

A particular attention will be paid to the role of labor market institutions and social norms, and to the way they may mitigate the effect of pure market forces.

**Evaluation:**

If the number of students is not too large, evaluation will be based on short presentations of selected articles by groups of students.

FIELD: Labor and Public Economics

TYPE COURSE: Core course

Public Economics

TEACHERS: A. BOZIO, J. GRENET, T. PIKETTY TUTORIAL TEACHER: J. BOMARE

COURSE LOAD: 36h TUTORIAL LOAD: 12h ECTS: 6

**Presentation:**

The objective of this course is to present an introduction to public economics, with special emphasis on the history of taxation, public spending and state formation, normative theories of government intervention and redistribution, and the incidence of tax and transfer policies, both in developed countries and in the developing world.

**Evaluation:**

To validate the course, students are required (1) to attend all lectures, and tutorials, and actively participate in class; (2) to submit three problem sets in the tutorials; (3) to take the exam. The exam will be based upon a good working knowledge of all the material that is presented in the lecture slides.

FIELD: Macroeconomics

TYPE COURSE: Core course

Advanced Macroeconometrics

TEACHERS C. DOZ, L. FERRARA

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

**Presentation:**

This class aims to review time series techniques and their application to macroeconomics. It is mainly devoted to VAR models, in the stationary as in the non-stationary framework. A technical presentation of these models will be first given, and applications of these models to macroeconomics will be presented in the second part.

First Part: (C. Doz)

This part of the class will introduce Vector Auto-Regressions (VAR) models, in the stationary and in the non-stationary framework. The non-stationary framework will in particular focus on cointegrated VAR models, and the macroeconomic interpretation of cointegration will be discussed. Both frameworks can be used to study the propagation of macroeconomic shocks, through Impulse Response Functions (IRF's), but this is left for the second part of the course.

Note that some technical parts of the slides which are given below will not be discussed during the class, and can be skipped. They have been however left for those who want to go into more technical details.

Second Part: (L. FERRARA) To be confirmed

**Evaluation:**

Written exam

FIELD: Macroeconomics

TYPE COURSE: Core course

Business cycles and Stabilization Policies

TEACHERS: T. BROER, J.O. HAIRALT

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

**Presentation:**

The aim of this course is to familiarize students with policy-relevant macroeconomic research. The course will focus on dynamic stochastic general equilibrium (DSGE) models of the business cycle, and on heterogeneous-agent models.

The course will be divided in three parts

Part 1 (T. Broer): This preliminary part provides a methodological framework to study Real Business Cycle models with or without heterogeneous agents. We will write recursively a simple real business cycle model to solve it numerically using global solutions.

Part 2 (J.O. Hairault): The aim of this first part is to familiarize students with DSGE approach: students will be able to fully understand the canonical real business cycle model, to build their own model of business cycle, to write the computer code (with matlab/scilab) and carry out experiments

(stochastic simulations, impulse response function). The methodology will be then applied to unemployment fluctuations in search and matching DSGE models.

Part 3 (T. Broer): This last part will introduce heterogenous-agent models with complete and incomplete markets. We will learn how to solve models with a full distribution of heterogenous agents, and we will discuss some topics about fiscal policy and redistribution in this class of model

**Evaluation:**

Report

FIELD: Macroeconomics

TYPE COURSE: Core course

Growth and Structural Changes

TEACHERS: P. AGHION, G . SAINT-PAUL, B. WIGNIOLLE

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

**Presentation:**

This Part 1 (Bertrand Wigniolle), Growth and Structural Changes: intergenerational aspects

This part study how family behaviors may determine growth and structural change. As a tool, the overlapping generations model is introduced: a growth model in which demography appears. After a presentation of the general properties of the basic model (Diamond 1965), the effect of intergenerational transfers is studied. The assumption of altruism is introduced and Ricardian neutrality is considered: how private transfers may offset public ones. Then human capital accumulation and endogenous fertility are introduced. A final part presents how this framework may explain the historical dynamics of economies.

1. Growth with overlapping generations: Diamond (1965), basic properties, equilibrium dynamics, efficiency of capital accumulation
2. Intergenerational transfers
3. Altruism and Ricardian neutrality
4. Human capital accumulation and growth
5. Endogenous fertility
6. Unified growth theory

Part 2 (SAINT-PAUL G)

Topic 1: Distributive conflict and economic growth

Topic 2: Growth and structural change

Topic 3: ICT, Robots, and Skilled-biased technical progress



Part 3 (P. AGHION)

**Evaluation:**

Written exam part BW and GSP and report for the part of PA.

**FIELD:** Regulation, Environment, Market

**TYPE COURSE:** Core course

**Economics of Public Intervention**

**TEACHERS:** P. GAGNEPAIN, D. MARTIMORT

**COURSE LOAD:** 36h **TUTORIAL LOAD:** n/a **ECTS:** 6

**Presentation:**

P. GAGNEPAIN PART:

Public intervention encompasses several types of governmental activities. This class focuses more in particular on how a public authority regulates the behavior of firms and ensures that competition law is applied adequately. We will focus on firms' regulation and markets deregulation; in particular, we will study empirical applications of contract theory in a situation of asymmetric information between regulators and operators and discuss tools which allow appraising the effects of deregulation on operating costs. Special emphasis will be given in this course to the construction of each empirical model that will be tested with data.

Content

Regulation, deregulation, and efficiency

- (a) Incentives and structural cost functions.
- (b) Measuring efficiency
- (c) Deregulation: The impact on costs, competition, and prices.
- (d) Structural versus reduced functional forms.
- (e) Static versus dynamic horizons

D. MARTIMORT PART:

Suggested Program

- 1) Preliminary: "All you should know about Incentives Theory and that you did not dare asking and that applies to regulation."
- 2) Models of Delegation: Single-Agent
- 3) Delegation between Congress and Agencies in U.S. politics.
- 4)



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- 5) Collusion, bureaucracy and capture
- 6) Application: The design of regulatory agencies.
- 7) Collusion, delegation and hierarchies.
- 8) Application. Regulation of complementary products
- 9) Privatization
- 10) Other topics on delegated public management
- 11) Public-Private Partnerships
- 12) Delegation: Multi-Agent Models and Informational Lobbying
- 13) Experts/advocates
- 14) Common Agency
- 15) Application: Lobbying
- 16) "Political Principals"
- 17) Independent regulatory agencies
- 18) Incentives for bureaucrats: Career concerns

**Evaluation:**

PG Written exam DM Report

**FIELD:** Regulation, Environment, Market

**TYPE COURSE:** Core course

**Environmental Economics**

**TEACHERS:** M. CHIROLEU-ASSOULINE, K. SCHUBERT

**COURSE LOAD:** 36h **TUTORIAL LOAD:** n/a **ECTS:** 6

**Presentation:**

This is a course on natural resources economics (Part 1, Katheline Schubert) and environmental economics (Part 2, Mireille Chiroleu-Assouline).

Part 1 (Katheline Schubert)

*Lecture 1: Non-renewable resources*

1. Scarcity: facts and data
2. The optimal extraction of a fixed stock of non-renewable resource
3. The role of market structure
4. Extensions: exploration and reserve discoveries; technical progress in extraction; the taxation on non-renewable resources (Ramsey and strategic taxation)
5. Fossil fuels and climate change: facts and data; carbon budget; dynamic Pigouvian taxation; strategic taxation; subsidy to the clean substitute and the Green Paradox.

6. The energy transition: an economic perspective.

*Lecture 2: renewable resources*

1. Biological and economic dynamics
2. Open access
3. The optimal exploitation of a renewable resource
4. Applications: fisheries, forests, water, biodiversity

Part 2 (Mireille Chiroleu-Assouline)

This part examines the application of economic principles to problems of environmental regulation. After an introduction to the theory of externalities, property rights, and corrective measures, we will examine the use of different pollution control tools like Pigouvian taxes, marketable permits, regulatory standards and subsidies, both in terms of their theoretical properties and practical potential as policy instruments. We will then turn to issues in the design of environmental policy under uncertainty or asymmetric information.

1. Environmental regulation without uncertainty

Externalities and theorems of welfare economics

Optimal pollution and internalization of the externalities

Comparison between instruments (efficiency/dynamic efficiency/distributive effects)

Focus on the distributive effects of carbon pricing

2. Environmental regulation in an uncertain world

Environmental risk

Precautionary principle

Choice between price/quantity instruments under uncertainty

3. Environmental regulation under ex ante asymmetric information

Firms incentives to hide information about abatement costs

Adverse selection and green products – Ecolabels

Contract theory

Alternative mechanisms

4. Environmental risk regulation under ex post asymmetric information

Non-point source pollution

Risk regulation: liability rules

Compliance, monitoring and incentives

**Evaluation:**

K. Schubert part: oral exam

M. Chiroleu-Assouline: final exam

**FIELD: Regulation, Environment, Market**

**TYPE COURSE: Core course**

**Industrial organization**

**TEACHERS: B .CAILLAUD, J.P.TROPEANO**

**COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6**

**Presentation:**

This This course is a core course in industrial organization: it is typically chosen by students registered in the Economic Theory or Regulation, Environment and Markets research workgroups.

The topic of the course is to study markets in which perfect competition among firms is not an acceptable assumption. Considering imperfect competition models to analyze the supply side of many markets is critical in order to better describe how real-world markets function, what are their efficiency performances and how they can, or should, be disciplined or regulated.

In this perspective, anyone interested in the supply side of the economy should find fundamental and central material in this course. In particular, students interested in competition policy, in mergers and acquisitions, in innovation, in online platforms and the use of personal data, ... from a corporate point of view or from a public policy point of view, will find the course useful.

Although PSE / APE is not a business school, the course is also central for those who intend to work in the consulting sector: the various pricing and marketing strategies of firms, their strategic decisions and investments, are related to the structure of the markets in which they participate, and the course will also offer insights on firms' behavior when they try to gain or maintain market power.

Economists specialized in IO with both a solid theoretical knowledge and interest and a strong empirical background are highly valued on the academic job market. So it makes perfect sense to build a curriculum that makes you familiar with advanced theoretical tools (IO, game theory and regulation / public intervention) and empirical methods (structural econometrics and data analysis, on top of the standard M1-APE econometrics curriculum).

The choice of topics and of approach

Industrial Organization is a vast domain of research that has been exploited heavily since the 70s. Many of the fundamental models used to analyze imperfect competition, differentiation, entry and strategic manipulation, mergers, vertical relationships, personalized pricing, R&D and patents, ... have been developed in the end of the XXth century. Even recent theoretical and empirical investigations on these themes rely on these fundamental “classical” models that most of you do not know and that all of you should learn.

At the same time, fascinating new challenges have been raised for IO in the past 10-15 years and there are many new developments that echo current public debates and concerns: most of them are related to the rise of the online economy as e.g. news issues in targeted advertising, the economics of platforms, patent pools, advanced price discrimination relying on data,... A stimulating approach to IO must necessarily spend time presenting these new issues in which research is active and promising.

The course will work on both frontlines! We will cover most of the standard theoretical models and explain their central theoretical contributions in the field, as these may be considered as reference points for whatever new developments in IO; and we will present a selection of recent and active topics, usually both from a theoretical and an empirical perspective. That said, it should be clear that we have a definite pro-theory bias and a definite bias towards the themes of our own research.

This may not be a serious limitation as there are many other IO economists at PSE and our aim is to provide a comprehensive view of the field at PSE. So, first, we will invite one or two other PSE professors to deliver parts of the course on which they are strong research contributors: probably C. Bobtcheff on models of innovation and patent races and P. Gagnepain on the empirical evaluation of mergers or of entry (to be confirmed later). Second, our course should be viewed as the “Part 1” of a general two-semester course in Industrial Organization, Regulation and Competition Policy. The course currently denominated IO and Applications (D. Spector, S2) would then be “Part 2”, as it provides a rich collection of applications of IO to competition policy issues, building on the fundamental models that we present.

#### Requirements, organization and evaluation

The course requires some knowledge in Microeconomics as well as in Game Theory. Attendance to the course of Introduction to Industrial Organization (P. Gagnepain, M1-S2) is not a prerequisite.

The course consists in 24 sessions of 1h30 each, over 12 weeks. J.P. Tropéano will deliver the first 12 sessions, and B. Caillaud will deliver the 12 other sessions. There are no tutorials associated to this course.

#### **Evaluation:**

The final grade will be based on a final exam (50% of the final grade) and a term paper (50% of the final grade).

The final exam will consist in exercises to be solved, using the standard tools used in the course, in some variation of frameworks seen in class. To help students practice and get familiar with the usual IO analysis, we provide a long list of exercises that have been given in the past as exams, homeworks, or simply practice exercises. Some, but not all, will be accompanied by sketches of solution. You are definitely not expected to solve all these exercises.

The term paper requirement encourages you to be innovative. Depending on what you are interested in, a promising term paper can turn into a master thesis project. The idea is for you to think more deeply about one question or model seen in class, to figure out an interesting extension or variant or alternative formalization, to motivate why this is economically relevant, and to propose a model or an approach to answer your question, and to start developing the analysis or explaining the strategy for solving the model. Given the time you can devote to this term paper, it is probably more reasonable to think of a theoretical term paper or, at least, of the theoretical part of a model to be analyzed empirically; but this is not a formal requirement. You should also have a look on all the themes that we will cover early enough so as possibly to jump ahead and start reading on a topic that will be covered near the end of the course if this topic is of special interest to you. The term paper should be about 5 pages long.

A reading list will be provided that contains roughly 1 or 2 required readings per session and a few additional readings per session to go further.

The final exam will take place during the dedicated week in January 2021 and the term paper is due January 31st, 2021.

The final grade will be based on a final exam (70% of the final grade) and two homework assignments (15% of the final grade each)

**FIELD: Development**

**TYPE COURSE: Elective**

**Economic policies and strategies for development in a globalized world**

**TEACHERS: F. BOURGUIGNON**

**COURSE LOAD: 24h TUTORIAL LOAD: n/a ECTS: 3**

**Presentation:**

This course covers the international aspects of contemporary economic development and poverty reduction in developing countries, including the various dimensions of globalization (trade, migration, capital movements and external financing, knowledge transfer, global public goods ...), the potential conflicts of interest between developing and developed countries, the need for global governance and the present role of international organizations.

**Evaluation:**

## ESSAY

**FIELD:** Economic and Social History

**TYPE COURSE:** Elective

Introduction to Economic History

**TEACHERS:** T. PIKETTY

**COURSE LOAD:** 24h **TUTORIAL LOAD:** n/a **ECTS:** 3

### **Presentation:**

The objective of this course is to present an introduction to economic history, with special emphasis on the interaction between capital accumulation, the global distribution of income and wealth, and growth

**Evaluation:** To validate the course, students are required to attend and actively participate to all lectures; to take the exam

**FIELD:** Economic Theory

**TYPE COURSE:** Elective

General Equilibrium Theory

**TEACHERS:** J.M .BONNISSEAU, E. DEL MERCADO

**COURSE LOAD:** 18h **TUTORIAL LOAD:** n/a **ECTS:** 3

### **Presentation:**

The general economic equilibrium theory studies the interactions among heterogeneous agents on commodity and financial markets. The course focuses on the classical Arrow-Debreu model and the main properties of a competitive equilibrium (existence, efficiency, local uniqueness, structure of the equilibrium set). The course is a necessary step to handle advanced questions arising from financial markets and markets imperfections, such as externalities, imperfect competition or increasing returns to scale.

Course Content - Part 1 (J.-M. Bonnisseau) & Part 2 (E. del Mercato)

- 1) Overview of an equilibrium model. The model of an Arrow-Debreu economy.
- 2) Consumers and producers: Competitive behavior.
- 3) Competitive equilibrium: Properties and existence.
- 4) Pareto optimality. The two theorems of welfare economics.
- 5) A differentiable approach: characterization of Marshallian and Hicksian demands. Generalized Slutsky equations.

6) Differential characterization of competitive equilibria. Regular economies. Local uniqueness and structure of the equilibrium set.

**Evaluation:**

Attendance, homeworks, presentation of selected research articles and/or written exam.

FIELD: Economics of Human Behavior

TYPE COURSE: Elective

Experimental Economics

TEACHERS: N. JACQUEMET

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

The course provides an overview of the use of laboratory experiments as an empirical method to investigate research questions in economics and social sciences. The focus is methodological, and illustrated based on examples and applications taken from the literature.

**Evaluation:**

Students work in groups of 2 or 3. They must hand-in a research paper at the end of the session, in which a motivated research question is to be answered based on an experiment. The design of the experiment must be described and discussed much carefully.

FIELD: Macroeconomics

TYPE COURSE: Elective

International macroeconomics

TEACHERS: M. BUSSIÈRE

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

*1. Economic and Financial Crises*

- 1.1 Output Dynamics in the Aftermath of Crises
- 1.2 Modeling crises; Generation I and II Models
- 1.3 Is this time different? Predicting crises
- 1.4 Contagion

*2. Global Imbalances*

- 2.1 The Intertemporal Approach to the current Account





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- 2.2 Theory and Empirics of Global Imbalances
- 2.3 Valuation Effects
- 2.4 Equilibrium Exchange Rates

### 3. *International Trade*

- 3.1 Exchange Rate Pass-Through
- 3.2 Exchange Rate Elasticities, J-Curve
- 3.3 Great Trade Collapse, Trade Slowdown, protectionism
- 3.4 Exchange Rates, Productivity and Growth

#### **Evaluation:**

Final exam

FIELD: Development

TYPE COURSE: Elective

Applications of impact evaluation in development microeconomics

TEACHERS K. MACOURS

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

#### **Presentation:**

The objective of this course is to study empirical papers based on quantitative impact evaluations of development interventions, and analyze them within the broader framework of development microeconomics. Students will learn how to critically read empirical impact evaluations using various econometric techniques, and how to design and implement impact evaluations of actual development projects. The course aims to provide initial guidance and feedback for students developing their own research in this area

#### **Evaluation:**

Grades for the class will be based on presentations, participation in discussions and a final written assignment

FIELD: Economic and Social History

TYPE COURSE: Elective

Economic History of Labor

TEACHERS: M. ARNOUX, J. BOURDIEU, JY. GRENIER, G. POSTEL-VINAY

COURSE LOAD: 24h TUTORIAL LOAD: n/a ECTS: 3

#### **Presentation:**

Un trait fondamental de la relation salariale : elle repose sur un rapport inégal entre celui qui vend sa force de travail (flux de service) et celui qui non seulement achète du travail, mais donne également des ordres et organise le travail (ce n'est seulement une asymétrie d'information). Rapport de subordination.

Rapport de subordination  $\neq$  relation bilatérale et symétrique entre offre et demande. Rapport social qui possède une dimension historique au sens où ce rapport de domination économique s'inscrit et se comprend comme faisant partie de l'ensemble des rapports sociaux en vigueur dans une société historique donnée.

Salariat n'est pas une spécification particulière de la relation économique mettant en jeu le travail, il est le produit d'une évolution de la société dont il est un des modes de régulation.

C'est en prenant comme fil conducteur l'alternative entre rapports de subordination et liberté de marché que nous allons tenter de construire une histoire économique du salariat.

#### Programme

##### 1. Introduction

Villes et campagnes, XVIe-XXe (1)

##### 2. Villes et campagnes, XVIe-XXe (2)

Dossier Creusot

##### 3. Dossier florentin : le salariat par anticipation ?

Fin du salariat ? Le travail freelance (exposé s3)

##### 4. Contrat et subordination

Master and Servant Act, avec extension à l'empire britannique (exposé s4)

##### 5. Travail en équipe

Faire travailler ensemble les esclaves : le gang system (exposé s5)

##### 6. Le salariat organisé par l'entreprise : la grande entreprise XVIIIe (JYG)

Grande entreprise et organisation interne du travail (XIXe-XXe) (exposé s6)

##### 7. Dettes contrôle du travail :

Testart sur l'Asie

Livret ouvrier (exposé s7)

##### 8. Social compact et extension mondiale du salariat (Michael Huberman) (Exposé s8)

#### **Evaluation:**

PRÉSENTATION ORALE

**FIELD: Economic and Social History**

**TYPE COURSE: Elective**

**Historical Demography**

**TEACHERS:** L. KESZTENBAUM

**COURSE LOAD:** 18h **TUTORIAL LOAD:** n/a **ECTS:** 3

**Presentation:**

This course deals with the relationship between population and economic development. It will present the basic concepts of demography and illustrate them by the most recent works in historical demography and economic history. The aim is to give a broad perspective on the industrial revolution and the subsequent emergence of the modern economy but also to discuss how this historical analysis may help to understand present issues in population studies. We will tackle two sets of problems. First, the industrial revolution occurred simultaneously with huge population changes, in both quantitative and qualitative ways. We will explore how these changes—reduction in mortality, changes in the size and shape of the body, lower birth rate, population aging, and so on—contributed, or not, to economic growth. Second, changes in the economic environment—not only increases in income or wealth but also changes of institutions, urbanization, inequality—have themselves important consequences on population living conditions. Looking at both ways of the relationship, we will address the larger question of the role of different actors—markets, the state, individuals, and families—on economic development in the long run.

**Evaluation:**

The evaluation of the course will rely upon a 4000 word essay in the general area of applied demography (preferably, but not necessarily, historical demography).

**FIELD:** Economic and Social History

**TYPE COURSE:** Elective

Monetary and Financial History

**TEACHERS:** P.C. HAUTCOEUR, E. MONNET

**COURSE LOAD:** 24h **TUTORIAL LOAD:** n/a **ECTS:** 3

**Presentation:**

This class aims at introducing to the history of money, banking and finance both at the micro and macroeconomic levels. It will present the development of monetary and financial instruments and institutions from early modern period, focusing mostly on the 19th and 20th century. It will emphasize both the need to properly understand a particular historical context in its socio-historical depth and the usefulness of economic theory and statistics when trying to understand what happened then.

For each session, students have to read the two required articles and write a short note on each of them (less than one page) highlighting criticisms and questions. This will only help starting the discussion during the class.

**Evaluation:**

For the final grade, students will be asked to summarize and organize the discussions that took place in class about two articles (either the two of the same course session, or two chosen in different sessions) (3-4 pages per paper).

FIELD: Economic Theory

TYPE COURSE: Elective

Theories of Collective Choice

TEACHERS: JF. LASLIER, A.MACE

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

In democracies, decisions are taken collectively, either directly or through delegation. The role of political institutions is to aggregate potentially divergent opinions and preferences into common decisions. This course is an introduction to the economic approach of collective decision making, both from the normative point of view of the theory of social choice, and from the positive point of view of game theory.

Using formal theory and empirical knowledge, we present some of the major results on the working of political institutions, in particular the behavior of voters and political parties. We then consider their impact on several important policy dimensions (taxation, redistribution, the size of the government etc.), and on the comparative study of political systems.

**Evaluation:**

Depending on the number of registered students, the grade for this course will be based either on a written exam or on the oral presentation of an article

FIELD: Economic Theory

TYPE COURSE: Elective

Topics in Exchanges

TEACHERS: G.DEMANGE

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

The objective of this course is to analyze the design and functioning of various venues of exchanges. We will focus on complex exchanges in which most participants are professional traders such as

firms, traders, and intermediaries. Examples include the markets for financial products, carbon permits, and electricity.

Understanding how the rules (or their absence) governing these exchanges impact participants' behaviors is crucial to assess the efficiency and stability of these markets and to design robust regulatory tools. Our approach is based on economic modelling and empirical works.

**Evaluation:**

ESSAY or PRESENTATION

FIELD: Economic Theory

TYPE COURSE: Elective

Topics in Game Theory

TEACHERS: F. KOESSLER

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

In this course we review central models, tools, and solution concepts of non-cooperative game theory. The course first covers fundamentals of non-cooperative game theory by studying basic and more advanced results for static games with complete information (strategic-form games), static games with incomplete information (Bayesian games), and dynamic games (extensive-form games). Then, we study more specific research developments in communication games, games with commitment, information design, and Bayesian persuasion.

Prerequisites. Expected utility theory, basic probability theory, Bayes' rule, basic notions of game theory (strategic-form and extensive form games, strategies and mixed strategies).

**Evaluation:**

- Written exam (2 hours, without document), based on exercises similar to those given as homework + some questions about the content of the course; 2/3 of final grade;
- Homework between classes; 1/3 of final grade;
- Participation in class; bonus to final grade.

FIELD: Economics of Human Behavior

TYPE COURSE: Elective

Advanced Decision Theory

TEACHERS: J.M. TALLON

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

In this course, we will present recent advances in the field of decision theory mainly in the domain of risk and uncertainty. We will review experimental and empirical data pointing to the need to go beyond the usual expected utility model, as well as basic economic implications of this model. We will then present recent generalizations of expected utility and will further explore their implications for various economic arrangements (contracts, markets etc).

**Evaluation:**

Three problem sets will be handed over and the students will also have to take a final exam

FIELD: Economics of Human Behavior

TYPE COURSE: Elective

Intertemporal choice under uncertainty

TEACHERS: L. ARRONDEL, A. MASSON

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

This course will be taught in French:

Microéconomie des arbitrages inter-temporels et inter-générationnels des ménages : développements récents de la théorie du cycle de vie, l'épargne et patrimoine, comportements à l'égard du risque (choix de portefeuille, gestion multirisques), comportements à l'égard du temps (préférence pour le présent, incohérence temporelle), rationalité de l'épargnant ; modèles de transmission des héritages (altruisme et réciprocity indirectes) ; taxation des héritages ; retraites et protection sociale, interaction entre solidarités publiques et privées, en particulier dans leur dimension intergénérationnelle, pensées et modèles de l'État-providence.

**Evaluation:**

Presentations

FIELD: Globalization, Political Economy, Trade

TYPE COURSE: Elective

Foreign Investment

TEACHERS: A. Reshef

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

This course focuses on multinational firms in the global economy: why they arise, their pattern of activity, and consequences for domestic economies. Part of the discussion will treat the effect of international outsourcing (“offshoring”) on the organization of production and on income distribution. Closely related “global value chains” will also be addressed.

**Evaluation:**

ESSAY

FIELD: Globalization, Political Economy, Trade

TYPE COURSE: Elective

Migration

TEACHERS: H. RAPOPORT, B. SPECIALE

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

The share of foreign born has grown from 5 to 12 percent on average in OECD countries and the recent refugee crisis is adding to those numbers. As a result, immigration has become a major issue in the public debate. The goal of the course will be to study the political economy of immigration. This includes the analysis of the labor market effects of immigration and the contribution of immigrants to the public budget. This also includes the broader role of immigration and diversity in determining economic performance, and the way migration affects political outcomes in receiving and sending countries.

**Evaluation:**

The course is organized around a list of required readings. Students must prepare for the class by reading the required articles ahead of the class.

Grading scheme: 50% group presentation (Part 1, H. Rapoport), 50% written exam.

**FIELD:** Globalization, Political Economy, Trade

**TYPE COURSE:** Elective

**Population Policy**

**TEACHERS:** C. BONNET, A. SOLAZ, L. TOULEMON

**COURSE LOAD:** 12h **TUTORIAL LOAD:** n/a **ECTS:** 2

**Presentation:**

Demography and family economics are the core of the Population and policies course. The course is thus highly recommended for students wishing to specialize in population studies, or to open their minds to another field. Fertility, marriage, divorce, early childhood inequalities are more and more studied in economics.

There is no formal prerequisite.

The course aims to present the basic tools of demographic in several domains. This class covers the micro aspects of family economics and public policies in the domain of population studies, mostly on developed countries. Based on both theoretical and empirical literature, we pay attention to the determinants and the consequences of demographic behaviors with a special focus on the role of public policies and gender inequalities. Some typical questions will be raised: How do social policies affect family formation and childbearing? How do partners allocate their time to paid and unpaid work? How does family breakup affect the well-being of adults and children? How can governments improve the sustainability of pension systems, in a context of an ageing population? How do pension reforms may influence behaviors and inequalities within the population?

The population and policies course is organized in 9 thematic lectures of 2 hours. After a first introductory lesson on pure demographic aspects, the eight following ones focus on one specific moment of the life-cycle. Each session discusses that topic in length. It aims at presenting the demographic indicators, the main related economic theories, with a presentation of some recent policy evaluation papers.

**Evaluation:**

To validate the course, students are required (1) to attend and actively participate to all lectures; (2) to perform a summary of one article of one of the eight topics and a critical report of an article on another topic. Depending on the number of students, the summary exercise could be a short oral presentation during the lesson.

**FIELD:** Globalization, Political Economy, Trade

**TYPE COURSE:** Elective

**Social Interactions**



TEACHERS: T. VERDIER

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

So called « non economic » aspects like social interactions, trust, solidarity, cultural and social norms become increasingly acknowledged in various important economic and social policy areas like crime, ethnic conflict, gender, the Welfare state and economic development, This course applies the tools of microeconomic analysis and other fields (sociobiology, evolutionary anthropology and statistical physics) to such issues, emphasizing the role of endogenous preferences, social norms and social interactions. The course is intended for PhD and DEA students, but well-prepared and motivated licence students may also take it with permission of the professor.

**Evaluation:**

Report

FIELD: Globalization, Political Economy, Trade

TYPE COURSE: Elective

Trade Policy

TEACHERS: C.BELLORA, AC. DISDIER

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

This course covers the empirics of trade policy, closely linked to the underlying theory, through two different lenses:

- Ex-post evaluation of past and current trade policies through econometric estimations.
- Applied general equilibrium models which aim at answering “what if?” questions about future agreements.

To do so, the course will mix lectures and computer-based exercises.

The course provides students with a standard toolkit in the field (effects of trade liberalisation and transfers; direct and indirect measurement of protection; CGE modelling...).

**Evaluation:**

The course is evaluated by a group project (1-2 students working on a project either proposed by themselves or chose in a list of proposals).

FIELD: Labor and Public Economics

TYPE COURSE: Elective

Economics of Well-being

TEACHERS: A. CLARK, C. SENIK

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

The main motivation of the subjective well-being literature is the famous “Easterlin paradox” that the average self-declared happiness does not increase during periods of sustained income growth (in post-war Japan for instance), even though the cross-section relationship between income and subjective well-being is positive. Hence, “raising the incomes of all will not increase the happiness of all” (Easterlin, 1974). Two common explanations of this paradox are income comparisons and adaptation, both of which reduce or eliminate the welfare benefits of income growth.

This course presents this new literature and how it has shed light on the issue of income inequality, income comparisons and the need for public interventions aimed at correcting these gaps. The main questions addressed by this literature are: the measurement of well-being, evidence for comparisons and adaptation, and the degree and type of income inequality that are desired by the population, and for which motives.

Accordingly, the course will address the following points:

- The Measurement of well-being
- Income growth and subjective well-being
- Income comparisons and subjective well-being
- Adaptation, expectations and subjective well-being
- Income inequality, SWB and the demand for income redistribution
- The cultural dimension of subjective well-being.

**Evaluation:**

Oral presentations

FIELD: Labor and Public Economics

TYPE COURSE: Elective

Taxation

TEACHERS: S. GAUTHIER

**COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3**

**Presentation:**

The course presents the basic tools (indexed by B) in the field of the economics of taxation, as well as more advanced material (indexed by A). The main textbook used is Salanié, B., The Economics of Taxation, MIT Press

**Evaluation:**

Oral exam

**FIELD: Labor and Public Economics**

**TYPE COURSE: Elective**

Urban Economics

**TEACHERS: L. GOBILLON**

**COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3**

**Presentation:**

Population, income and economic activity are distributed unevenly across and within cities. The purpose of this course is to analyze agglomeration and dispersion forces, urban land use and segregation. A particular attention will be paid to spatial equilibrium mechanisms involving households, firms and amenities. Urban policies meant to develop deprived areas and help the poor living in cities will also be studied

**Evaluation:**

Essay based on an article not presented in class (which will involve a critical reading and a research project).

**FIELD: Macroeconomics**

**TYPE COURSE: Elective**

Computational Economics

**TEACHERS: N. COIMBRA**

**COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3**

**Presentation:**

The main goal of this course is to enable students to solve complex dynamic macroeconomic models that require numerical solutions.

With the increasing complexity of economic modelling, numerical solutions are becoming unavoidable for macroeconomists dealing with fully dynamic models. This course intends to be a practical and applied introduction to the main methods available to researchers.

The course will not only describe the methods from a theoretical perspective, but it will also have an important hands-on component. Students will be working with Matlab codes and will be expected to be able to write their own by the end of the course, with the goal of enabling them to use these methods in their own dissertation.

**Evaluation:**

Project – to be confirmed

**FIELD:** Macroeconomics

**TYPE COURSE:** Elective

**Coordination of expectations**

**TEACHERS:** R. GUESNERIE

**COURSE LOAD:** 18h **TUTORIAL LOAD:** n/a **ECTS:** 3

**Presentation:**

The course starts with a reminder of crises in the recent or less recent past. The introductory emphasis is put on the recent 2008 crisis and a discussion of questions for economic theory. Indeed, this course will put a special attention on the issue of expectational coordination and will attempt to provide a critical assessment of the “rational expectations hypothesis” that has come to dominate theoretical economic modelling.

Lecture 2 comes back on the basic references of economic theory, the static Arrow-Debreu model (the French garden) and its inter-temporal version (the British garden). One also sheds a first light on the problems of expectational coordination, by discussing the existence of durable bubbles.

Lecture 3 goes further in exploring the surroundings of the “garden”. It provides an overview of the present explanations of temporary bubbles. Again the questions of information transmission and of the quality of expectations come into the picture.

Lecture 4 presents an over view of the history of money and banking and then provides a series of theoretical insights on liquidity and crisis which reflect both the agency theory and the expectations formation viewpoints.

Lecture 5 selected tools for an "eductive" approach to the study of expectational coordination. The tools may derived from game theoretical premises (rationalizability), or from a simple intuition on the stability of beliefs around an equilibrium. “Eductive” coordination in an "economic" context in

which final agents are numerous and concerned with aggregate variables, is compared with the alternative approach of “adaptive” learning, both in finite and infinite horizon contexts.

Lecture 6 gives up the park around the garden to enter metaphorically the jungle, i.e the study of the stock market. An attempt is made to compare facts with the views drawn from the toolbox of standard models.

Lecture 7 comes back to some problems in finance (like the efficient market hypothesis) or in macroeconomics (like the connections between price adjustments and expectations)

**Evaluation:**

Report

**FIELD:** Macroeconomics

**TYPE COURSE:** Elective

**Financial and Monetary Macroeconomics**

**TEACHERS:** J.B. CHATELAIN

**COURSE LOAD:** 18h **TUTORIAL LOAD:** n/a **ECTS:** 3

**Presentation:**

This course develops opposite theoretical frameworks modelling policy-maker's decisions based either on negative feedback (commitment) or on positive feedback (discretion, simple rule) for monetary, fiscal and financial stabilization policy. These theoretical frameworks are also based on opposite monetary policy transmission channels, either on the intertemporal substitution effect of the interest rate or on the channel of the cost of capital possibly including the credit channel. These theoretical frameworks are evaluated with respect to five criteria: time-consistency and credibility, multiple equilibria versus determinacy, the identification of structural parameters, their fit with US pre-Volcker and Volcker-Greenspan Fed's monetary policy since 1960, and their robustness to misspecification. The course analyzes the gaps between the mechanisms of the new- Keynesian dynamic stochastic general equilibrium models and the policy-makers' statements on their stabilization policy.

Requirements:

The course is in large part problem solving with exercises. The final grade will be based on a written exam very similar to problem sets of the course (3/4 of the grade, 2 hours, around 50 questions) and vector auto-regressive homework (1/4 of the grade)

**Evaluation:**

The final grade will be based on a written exam very similar to problem sets of the course (3/4 of the grade, 2 hours, around 50 questions) and vector auto-regressive homework (1/4 of the grade).

FIELD: Macroeconomics

TYPE COURSE: Elective

Topics in Macroeconomics

TEACHERS: P. ARTUS

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

Part 1: Monetary policy: contemporary theory

Introduction: the traditional monetary policy models (Barro, Gordon, etc.)

Chapter 1: Transparency

Chapter 2: Uncertainty Chapter

Chapter 3: Deflation Chapter

Chapter 4: Asset prices

Chapter 5: Delegation of objectives and externalities

Chapter 6: Fiscal policy and monetary policy

Prerequisite: knowledge of macroeconomics at the bachelor's level (for example Blanchard, Cohen).

Part 2: The choice of exchange rate regime

Chapter 1: Intermediate exchange rate regimes are unstable

Chapter 2: The choice of exchange rate regime when only monetary policy is taken into account

Chapter 3: The choice of exchange rate regime when fiscal policy is taken into account

Chapter 4: Impossible trinity, capital control Chapter 5: Are currency boards an efficient regime?

Chapter 6: Local currency debt - foreign currency debt (original sin)

Prerequisite: knowledge of international economics e.g. a bachelor's degree (for example Krugman, Obstfeld).

**Evaluation:**

Final exam or report

FIELD: Regulation, Environment, Market

TYPE COURSE: Elective

Empirical Industrial Organization

TEACHERS: A. SECCHI

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

Modern economies are characterized by ubiquitous, large and persistent forms of heterogeneity in any dimensions of business firms characteristics and of their dynamics. The primary scope of this course is to present an overview of the empirical investigations on the nature and on the evolution of such a rich landscape underlying industrial structures with a specific emphasis on developed economies. Simple stylized models able to generate the observed features of industrial dynamics are also presented and critically reviewed.

**Evaluation:**

There will be a written and closed book exam. Grade range is 0-20, the French standard. Knowledge of master level microeconomic theory, industrial organization and applied econometrics is expected

FIELD: Regulation, Environment, Market

TYPE COURSE: Elective

Environmental Policy

TEACHERS: K.MILLOCK, M.FODHA

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

This course will cover a selection of issues on the economic analysis of environmental policy, all of recent scientific activity and policy relevance. It will introduce you to some of the seminal models in the literature as well as to current research on the issues.

**Evaluation:**

The final grade will be based on a presentation of an article in class and a written referee report of an article, both based on articles designated by the instructors. Active participation is expected during the course. In order to favor active class participation, each week's class will have a student making a 20 min presentation of a paper assigned by the instructor one week earlier

FIELD: Regulation, Environment, Market

TYPE COURSE: Elective

Industrial organization and applications to antitrust and regulations

TEACHERS: D. SPECTOR

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

This class surveys recent contributions to theoretical industrial organization and their applications to competition policy. In each class, the main theoretical results are reviewed and then applied to recent cases handled by competition authorities

**Evaluation:**

Grading will be based on student presentations (50%) on actual competition cases, based on descriptions of the case (such as decisions by competition authorities and courts) and on related theoretical literature and a final exam (50%). Student presentations are scheduled to take place in each class, starting on the fourth one. A written support is expected for the student presentations, and the grading will take it into account in addition to the oral presentation.

FIELD: Regulation, Environment, Market

TYPE COURSE: Elective

The Theory of Incentives

TEACHERS: D. MARTIMORT

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3

**Presentation:**

\*pending\*

**Evaluation:**

Report

FIELD: Transversal

TYPE COURSE: Elective

Econometric Methods

TEACHERS: P.KETZ

COURSE LOAD: 18h TUTORIAL LOAD: n/a ECTS: 3



**Presentation:**

This course builds on and is complementary to the first-year econometrics series. While the treatment is somewhat theoretical, the focus lies with the applicability and usefulness of econometric methods. Throughout the course the theory is motivated and illustrated by means of examples.

The first part of this course treats classic asymptotic theory, including consistency and asymptotic normality results for extremum estimators. While extremum estimators include e.g., OLS, 2SLS, and Generalized Method of Moments (GMM) estimators, the exposition focuses on Maximum Likelihood (ML) estimation. Besides covering textbook examples, such as the Probit model, the course aims at providing students with the ability to model and estimate (simple) structural models using ML. In addition to standard inference methods, the course discusses bootstrap based inference.

The second part of the course treats clustering (clustered standard errors), which plays an important role in applied econometrics. After taking this course, students will be familiar with the different techniques currently available and should be able to appropriately choose among them in applications.

As part of the course, students learn to understand and use Monte Carlo simulations as a useful tool in assessing empirical/econometric methods. Homework assignments and a final project help achieving this learning goal.

NOTE: The course, in particular the assignments and the final project, will require coding in R. (You may also use Matlab if you prefer, but instructions will be based on R.)

**Evaluation:**

The final project takes the form of a short paper. The goal is to perform a Monte Carlo simulation to study a particular econometric issue/question. You may work in groups of up to three people.

The final grade is a weighted average of the final project (60%) and the three assignments (40%; equally weighted)

**FIELD:** Transversal

**TYPE COURSE:** Elective

**From statistical physics to social sciences:** an outline

**TEACHERS:** JP. BOUCHAUD

**COURSE LOAD:** 18h **TUTORIAL LOAD:** n/a **ECTS:** 3

**Presentation:**

- I. Mild fluctuations vs. Wild fluctuations

- II. Multiplicative models for population, wealth, ...
- III. Branching processes, Networks, Avalanches
- IV. Interactions, instabilities & collective effects
- V. Multivariate statistics and large dimension problems
- VI. The Dynamics of Financial Markets

**Evaluation:**

The evaluation will be under the form of a written exam of 2h30

**FIELD:** Transversal

**TYPE COURSE:** Elective

**Machine learning in economics**

**TEACHERS:** H. BULL & P. KETZ

**COURSE LOAD:** 18h **TUTORIAL LOAD:** n/a **ECTS:** 3

**Presentation:**

The course provides an introduction to modern machine learning techniques, with a focus on applications in economics. The course can be broken down in three parts. First, we introduce some of the most popular machine learning techniques and discuss their use and advantage in prediction exercises (Part 1). Then, we discuss two recent applications of machine learning in (micro-)econom(etr)ics, where the goal lies with estimating causal effects. The first application concerns estimation of average treatment effects in the presence of many control variables (Part 2). The second application concerns estimation of heterogeneity in average treatment effects (Part 3).

The statistical/econometric theory of each part is covered in a lecture and a corresponding lab session (in the subsequent week) covers the practical side of it, going through implementation details in R.

**Evaluation:**

HOMEWORK ASSIGNMENTS AND A FINAL PROJECT

**FIELD:** Master Thesis

**TYPE COURSE:** Common core

**THE SUPERVISOR MUST BE A MEMBER OF PSE**

ECTS: 18

**Presentation:**

The M2 master's thesis is carried out under the supervision of a research supervisor.

Students are encouraged to contact an instructor working on topics of interest to the student and to discuss possible dissertation topics. Every year, instructors also propose topics that students may wish to write on.

The final choice of a master's dissertation supervisor must take place, at the latest, in January of the M2 year. A master's dissertation proposal (3 pages maximum), approved and signed by a research supervisor, must be submitted to the program's administration at the end of December.

All PPD instructors and PSE members can serve as research supervisors for the master's dissertation. If your subject justifies it and with the approval of the director of the program, you may choose a supervisor from outside the program. In this case the rapporteur (referee) that you will choose for the defense must be a teacher from the PPD course.

IMPORTANT! The master's dissertation is graded on a scale of 0 to 20. The defense lasts roughly 45-60 minutes before a jury composed of the master's dissertation and a rapporteur. After the defense, the defense jury proposes a grade for the dissertation that is transmitted to the master's office. However, the final grade is attributed and validated ONLY by the end of the year jury on the basis of the grade proposed by the defense jury, the dissertation, and, for grades of 16 and higher, the jury report.

The jury report for grades equal or higher than 16 is compulsory.

FIELD: Research seminar

TYPE COURSE: Research seminar

Behavioral Economics

TEACHERS: CLARK A. (coord), ÉTILÉ F.

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

FIELD: Research seminar

TYPE COURSE: Research seminar

Development

TEACHERS: GIGNOUX J. , WREN LEWIS L. (coord)

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

FIELD: Research seminar

TYPE COURSE: Research seminar

Economic History

TEACHERS: BOURDIEU J. (coord), MONNET E.

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

FIELD: Research seminar

TYPE COURSE: Research seminar

Economic Theory

TEACHERS: BOBTCHEFF Catherine, CAILLAUD Bernard, TERCIEUX Olivier

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

FIELD: Research seminar

TYPE COURSE: Research seminar

Macroeconomics

TEACHERS: BROER T. , SAINT-PAUL G.

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

FIELD: Research seminar

TYPE COURSE: Research seminar

Public Economics and Labor

TEACHERS: BEHAGHEL L. , BREDA T. (coord), FONTAINE F. , HEMET C.

COURSE LOAD: 12h TUTORIAL LOAD: n/a ECTS: 2

FIELD: Research seminar

TYPE COURSE: Research seminar



PARIS SCHOOL OF ECONOMICS  
ÉCOLE D'ÉCONOMIE DE PARIS

Regulation, Environment and Markets

TEACHERS: GAGNEPAIN P. , GAUTHIER S. , OLLIVIER H.

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6

FIELD: Research seminar

TYPE COURSE: Research seminar

Trade and Political Economy

TEACHERS: FONTAGNE Lionel, RAPOPORT Hillel

COURSE LOAD: 36h TUTORIAL LOAD: n/a ECTS: 6