Economics Department

2021-2022 Past Courses

ADVANCED COURSES

Each teaching block is followed by exams – please see overview below:

Teaching Block I	Teaching Block II	Teaching Block III	Teaching Block IV
26 August - 8 November	10 November - 21 January`	25 January - 25 March	29 March - 27 May
Exam Week: 2-8 November	Exam Week: 17-21 January	Exam Week: 21-25 March	Exam Week: 23-27 May

---

Advanced Courses

During the first, second and third year, students are required to pass 8 advanced courses to be chosen with the agreement of the supervisor/advisor. First-year students can only attend advanced courses in block IV.
Each teaching block is followed by exams.

Overview

- Outline of the Applied Economics and Econometrics sequence - compulsory and advanced courses
- Outline of the Macroeconomics sequence - compulsory and advanced courses
- Outline of the Microeconomics sequence - compulsory and advanced courses

---

Advanced Courses

To register please click on the Common Course Catalog

Teaching Block 1

- **The Econometrics of Causality, (Fabrizia Mealli) - ECO-AD-ECONCAU - Full Credit**

Credits: 1
Professor: Prof. Fabrizia Mealli (University of Florence)
Course objective
This course will feature 10 2-hour lectures.
Grading
There will be final class room exam (project presentation) and take home assignments (simulation and real data exercises).

- **Machine Learning for Economist, (Sergio Pastorello) - ECO-AD-MACHLEAR - Full Credit**

Credits: 1
Professor: Prof. Sergio Pastorello (University of Bologna)
Course objective:
A 20 hour course in Machine Learning tools for economists. At the end of the course the student will have a good understanding of the main tools used in machine learning.
In particular, he/she: - understands and knows how to apply key aspects of machine and statistical learning, such as out-of-sample cross-validation, regularization and scalability - is familiar with the concepts of supervised learning, regression and classification - understands and can apply the main learning tools such as lasso and ridge regression, regression trees, boosting, bagging and random forests, support vector machines and neural nets.
- The course will put special emphasis on empirical applications using the R software.
Grading:
Problem sets (30%) and a final project (70%).

- **Modern Difference-in-Differences, (Mirjam Reutter) - ECO-AD-CAUINF - Half Credit**

Credits: 0,5
Professor: Prof. Mirjam Reutter (Max Weber Fellow)
Course objective:
Diference-in-Diferences approaches are one of the most popular and powerful tools for causal inference in use today. In the last years, there was an explosion of work on DiD methods that has made it very dicult to keep track of rapidly changing standards.
This course will begin with the basic DiD design using two-way fixed effects and discuss stateof-the-art applications. It will cover extensions like staggered treatment adoption, heterogeneous treatment effects, interference, and matching.
We will work through assumptions, diagnostics, practical examples and code in R and Stata (if available).
Moreover, students will present and discuss extensions of the classical DiD design with practical examples from recent papers.

Grading:
• Participation in the paper and presentation discussions (20%)
• Presentation of a research paper (80%)

- **Firm Heterogeneity in Macroeconomics, (Basile Grassi) - ECO-AD-FIRMHETMA - Half Credit**

  Credits: 0,5
  Professor: Prof. Basile Grassi (Bocconi University)
  Course objective:
  The macroeconomic literature usually assume that production is carried out by one representative firm. However, even within the same narrowly defined industry, firms are greatly different with respect to size, productivity, quality, mark-ups, market power... In the last two decades, macroeconomists have learned to model many of these heterogeneities in a tractable way, and this has lead to great advances in our understanding of the microeconomic determinants of macroeconomic outcomes. In this course, we start by studying some empirical facts on firm heterogeneity. Then, we will cover the important theoretical models of firm heterogeneity. These will enable us to understand how developments at the firm level determine aggregate productivity, aggregate fluctuations, and, how linkages among firms
  propagate shocks and distortions. Finally, we will study recent empirical evidence, empirical methodology and models in order to study concentration, markup and market power.

- **Quantitative Methods and Applications: Dynamic Factor Demand, (Russell Cooper)- ECO-AD-DYNFAC - Half credit**

  Credits: 0,5
  Professor: Prof. Russel Cooper (EUI)
  Course objective:
  These lectures study decision problems of firms in a dynamic stochastic setting. To do so, the course will develop a number of tools and then apply them to the firms' choice problems and, in some cases, an equilibrium outcome.
  A primary tool is dynamic programming. The course will build upon the basic foundations for dynamic programming, both in theory and through numerical analysis.
  Another tool is the use of simulated method of moments to estimate parameters of dynamic economic models.
  These were taught in the first year core courses and will be reviewed at the start of this course. The main focus will be on dynamic factor demand, both capital and labor.
  These applications will use and further develop the tools taught in the first part of the course. In addition, policy dimensions of the applications will be developed.
  Grading:
  You will have a requirement to write a paper following the structure of the summer report.

- **Fiscal and Monetary Policy and Institutions in a Century of Crises, (Ramon Marimon)- ECO-AD-FISMON - Full Credit**

  Credits: 1
  Professor: Prof. Ramon Marimon (EUI)
  Course objective:
  This advanced (full-credit) course is open to everyone, from 2nd year graduates on, but specially designed for 2nders. The course is self-contained, although familiarity with recursive methods is recommended. As the subtitle indicates, the three crises of the 21st Century will be on the background of the course. Both, in terms of the theoretical and economic policy issues that they have unveiled, and in terms of the new developments in macro-finance that have come out, and are coming out, from them. For students taking the course for credit, in principle, the grade of the course will be mostly [75%] based on a short project, which can be done by one or two of you (three will require approval and more work). It will consist of: 1) choosing, and briefly explaining, a specific problem/question/topic of the 21st Century crises that you think deserves more research [20%]; 2) critically summarize the ‘state-of-the-art’ by deconstructing one article, or two and, possibly, make reference to others [20%], and 3) propose how would you
  pursue the research on the topic if you had more time [20%] (if you have more than a proposal this would be counted as ‘extra’) [+ 15% overall assessment and presentation]. The presentation will consist of a draft of no more than 10 pages (min 11pt, single space
  and proper borders; not counting references and possible ‘extra’ material) and, time permitting, a short in class (or online) presentation. In addition, there will be a short (possibly in-person) exam [15%] and I will also count class participation [10%].

- **Asset Pricing and Bubbles, (Edouard Challe) - ECO-AD-ASSPRIBUB - Half Credit**

  Credits: 0,5
  Professor: Prof. Edouard Challe (EUI)
  Course objective
  This half-credit course covers the theory of rational bubbles in asset prices. It focuses on (i) the sources of asset bubbles, i.e., which frictions (dynamic inefficiency, financial frictions, agency problems...) may give rise to bubbly equilibria; (ii) their macroeconomic implications (for efficiency, growth, instability, capital flows, factor misallocation...); and (iii) their policy implications (for monetary, fiscal and macro-prudential policy).
  Grading
  Grading will be based on a referee report (50%) and a 20-minute in-class presentation (50%).

- **Empirical Industrial Organization, (Philipp Schmidt-Dengler) - ECO-AD-EMPIO - Full Credit**

  Credits: 1
  Professor: Prof. Philipp Schmidt-Dengler (University of Vienna)
  Course objective
  This course introduces students to empirical methods in Industrial Organization and Competition Policy.
  There will be \problem sets" based on the readings,in which students will use econometric software to apply the introduced techniques.
  Students should make sure you have access to the relevant computer programs, such as R, Stata or similar software. You are free to use whichever software you prefer.
  As a student I learned to use commercial software packages like Gauss, Matlab, Stata etc. but I think it is preferable to learn and use free packages like Octave, Python, or R.

Teaching Block 2

- **Economic Measurements, (Sule Alan, Tomas Crossley) - Full Credit - ECO-AD-ECNMSM**

Credits: 1
Professor: Prof. Sule Alan, Prof. Tomas Crossley
Course objectives:

Topic 1 (2 lectures)
Introduction to National Accounting: Output, income and expenditure GDP; Intermediate consumption and value added. Supply-use balancing. Sectoral accounts. National and sectoral balance sheets. Lequiller and Blades (2014), chapters 1, 4-8, and 10; Lecture notes and additional assigned readings.
Topic 2 (2-3 lectures)
Price-Volume Decomposition: Price and quantity Indices. Axiomatic and economic approaches. The CPI in practice. Multilateral price indices and international comparisons. Lequiller and Blades (2014), chapters 2 and 3; Lecture notes and additional assigned readings.
Topic 3 (1 lecture)
The Labour Market: Labour market states and labour market ows. Lecture notes and assigned readings.
Topic 4 (1-2 lectures)
Investment, Capital and Productivity: Measuring investment. Estimation of the capital stock. Productivity measurement.
Lecture notes and assigned readings.
Topic 4 (lecture)
Investment, Capital and productivity: Measuring Investment. Estimation of the capital stock. Productivity measurment.
Lectures notes and assigned reading.
Topic 5 (1-2 lectures)
Poverty and Inequality: Household income, consumption and wealth. Poverty lines and measures. Inequality measures.
Lecture notes and assigned readings.
Topic 6 (1-lecture)
Item Response Theory: Construction and tests and scales.
Lecture notes and assigned readings.
Topic 7 (4 lectures)
Measuring Economic Preferences: Risk preferneces and Time Preferences. Incentivized measures and survey measures.
Topic 8 (lectures)
Measuring Social Preferences:
Lecture notes and assigned readings.

Grading:
Problem set (30%)
Final project (70%)

- **Life-Cycle Heterogeneous Agents Models: Solution and Estimation, (Jesus Bueren) - Full Credit - ECO-AD-HETAGT**

  Credits: 1
  Professor: Prof. Jesus Bueren (EUI)
  Course objective:
  The goal of this course is to introduce students to life-cycle heterogeneous agents models solution and estimation methods. For this purpose the first part of the course focuses on life-cycle heterogeneous agents models in general equilibrium. The students are given a set of instructions to solve the Huggett (1996). Then, we revise econometric tools for estimation of structural models using moment matching. Wecover the method of moments, the generalized method of moments and simulated method of moments. We derive the asymptotic properties of the estimators and how to compute standard errors in finite samples. Finally, we bring together the theory and the metrics part of the course by estimating preference parameters in a life-cycle model using panel data.
  Grading:
  2/3 computer assignments + 1/3 presentation

- **Computations and Quantitative Models in Macro, (Alexander Monge-Naranjo) - Half Credit - ECO-AD-COMQUANM**

  Credits: 0,5
  Professor: Prof. Alexander Monge-Naranjo
  Course objective:
  In this advanced half-credit course we will cover a selected set of computational techniques that are used in ongoing quantitative, general equilibrium macro research. Among the topics, we will discuss how to solve nonlinear equations, maximization problems, difference equations, dynamic programming problems, numerical integration, etc. This will be done while studying models with economic growth, and business cycle with heterogenous agents and incomplete markets.

  Grading:
  The grade will be based on problem sets and an original research proposal.

- **Topics on Housing and the Macroeconomy, (Antonia Díaz) - Half Credit - ECO-AD-HOUSMACR**

  Credits: 0,5
  Professor: Prof. Antonia Diaz (Fernand Braudel Fellow)
  Course objective:
  This course aims to provide an overview of some topics regarding the role of Housing in Macroeconomic questions.
  Grading
  The evaluation consists of a referee report and/or a presentation of a paper (sessions 2 – 5).

- **Macro Models with Exogenous and Endogenous Incomplete Markets, (Árpád Ábrahám)- Half Credit - ECO-AD-ENDOG**

  Credits: 0,5
  Professor: Prof. Arpad Jeno ABRAHAM (EUI)
  Course objective:
  This course introduces some new classes of models and applications where agents face idiosyncratic shocks in a dynamic (general equilibrium) context. We will mostly concentrate on models where these shocks cannot be fully insured either because of the lack of (complete) insurance markets (exogenous incomplete markets) and/or because of lack of commitment or private information frictions (endogenous incomplete markets).

- **Advanced Industrial Organization, (Giacomo Calzolari) - Full Credit - ECO-AD-ADVINDORG**

  Credits: 1
  Professor: Prof. Giacomo Calzolari (EUI)
  Course objective:
  Students attending this course will acquire a thorough knowledge of how firms interact in non-competitive markets and how they may gain and exploit a competitive advantage. A general introduction will be provided, and some specific topics will be further explored (see list below). Two topics in particular will be covered: competition policy (its aims, how it works), the industrial organization of banking. Although the course is mainly based on models, empirical applications will be emphasized and discussed, with a focus to policy design.

  Grading:
  The grading will be based on a class presentation of a paper with a written referee report and a research proposal. Two modes are available: presentation-mode involves the following weights 60% presentation and report 40% research proposal; research-mode 40% presentation and report 60% research proposal.

Teaching Block 3

- **Field Research Design and Impact Evaluation (ECO-AD-FLDDSGN)**

Credits: 1
Professor: Prof. Sule ALAN
Course objective:
Topic 1:
Introduction to Impact Evaluation: Thinking about a major policy problem, designing an experiment to evaluate a program that aims to solve this problem, and evaluating the program in a causal manner to guide policy.
Lecture notes.

Topic 2:
Theory of Change and Data: Establishing theory of change and underlying mechanisms in evaluation designs.
Lecture notes.

Topic 3:
Randomization in Practice: Random assignment of program participation, cluster designs, phase-in designs, balance checks, research ethics in program participation.
Lecture notes.

Topic 4:
Indicators and Measurement: Determining outcomes of interests: Real outcomes, behavioural (incentivized) outcomes, lab-in the field, survey outcomes.
Lecture notes.

Topic 5:
Sampling: Determining optimal sample size, power calculations, study registration, pre-analysis plan (PAP). Lecture notes.

Topic 6:
Threats and analysis: Dealing with missing data, non-compliance, demand e
ects, and attrition.

Topic 7:
Evaluation: ATEs, ITTs LATEs, inference, small sample permutation, mechanism search, mediation analysis.
Lecture notes.

Topic 8:
An evaluation from A to Z: Student presentations of the outline of the take home project, receiving feedback.

Grading:
Course work will be 20 percent outline presentation 80 percent take home project. The project will be a case study where students are expected to replicate a well-known RCT from design stage to dissemination of the results. There will be no exercise classes.

- **Topics in Microeconometrics, (Alessandro Tarozzi) - Full Credit - ECO-AD-MICMTRIC**

  Credits: 1
  Professor: Prof. Alessandro TAROZZI
  Course objective:
  A 20-hour topics course in applied micro-econometrics, with a particular emphasis on problems likely to be encountered in applied micro work, and techniques for dealing with those.

  Grading:
  There will be 2-3 problem sets and a take home exam.

- **Topics in Macroeconometrics, (Barbara Rossi) - ECO-AD-MACMTRIC**

  Credits: 1
  Professor: Prof. Barbara Rossi (UPF)
  Course objective:

  A course in Macroeconometrics. 20 hours.
  The course will offer an overview of the econometric techniques used in the empirical analysis of monetary and fiscal policy as well as their empirical results.

  The course has three specific objectives. The first is to equip students with the tools they need for empirical research on monetary and fiscal policy. The second objective is to lay out the econometric theory used in estimating the effects of economic policies, with an emphasis on recent developments. The third objective is to analyze selected recent empirical works.

  1. Overview of econometric techniques to estimate the effects of economic policies
  2. Selected works on monetary policy: identification, estimation and empirical results
  3. Selected works on fiscal policy: identification, estimation and empirical results

  Grading:
  The evaluation will be based on an in-class presentation and a written exam.

- **Inequality and Education, (Alexander Monge-Naranjo) - Full Credit- ECO-AD-INEQEDU**

  Credits: 1
  Professor: Prof. Alexander MONGE-NARANJO
  Course objective:
  In this advanced half-credit course we will cover a selected set of computational techniques that are used in ongoing quantitative, general equilibrium macro research. Among the topics, we will discuss how to solve nonlinear equations, maximization problems, difference equations, dynamic programming problems, numerical integration, etc. This will be done while studying models with economic growth, and business cycle with heterogenous agents and incomplete markets.

  Grading:
  The grade will be based on problem sets and an original research proposal.

- **Topics in Banking and Finance, (Thorsten Beck) - Half Credit- ECO-AD-BANKFIN**

  Credits: 0,5
  Professor: Prof. Thorsten BECK
  Course objective:
  This course aims to provide an overview of the recent empirical banking literature, touching on different topics such as the macro-prudential regulation, fintech, lending techniques and sustainable finance. The evaluation consists on a referee report and/or a seminar presentation of a paper

- **Optimal Fiscal Policy in (Quantitative) Macro Models, (Axelle Ferriere) - Half Credit - ECO-AD-OPTFISPOL**

  Credits: 0,5
  Professor: Prof. Axelle Ferriere (Fernand Braudel Fellow - Paris School of Economics)
  Course objective:
  Rising inequality has become a major concern in the policy debate. Incomes at the top have grown substantially in the U.S. over the past forty years, whereas below-median incomes have stagnated. In this context, how should a government design a tax-and-transfer system to reduce inequality while promoting growth? A large literature in macroeconomics has thought about optimal taxes in the context of Ramsey plans, where governments choose optimal tax systems within a narrow class of fiscal tools. We will first review this literature and revisit two fundamental results: capital taxes should be zero, and labor taxes should be smoothed. We will then discuss the recent quantitative macro literature which uses realistically calibrated heterogeneous-agent general-equilibrium models to quantify optimal fiscal policy.
  Grading:
  Each researcher will prepare a 20-minute presentation of a paper. Papers will be assigned during the first lecture. No free lunch: anyone attending the class will have to present.

- **Topics in Political Economy 2, (Guadalupe Correa) - Half Credit -ECO-AD-POLECO2**

  Credits: 0,5
  Professor: Dr. Guadalupe Correa (Max Weber Fellow)
  Course objective:
  The aim of this course is to introduce you to theoretical and applied research in political economy. We will formally study the strategic interaction between voters, political institutions and economic outcomes. Topics that will be covered include: theory of voting, direct democracy, representative democracy and electoral competition, political economy of redistribution, comparative political institutions, campaign spending.

  Grading:
  Communicated in class.

- **Topics in Computational Game Theory, (Arthur Dolgopolov) - Half Credit - ECO-AD-COMPGMTHR**

Credits: 0.5
Professor: Dr. Arthur Dolgopolov (Max Weber Fellow)
Course objective: The “Computational Game Theory" is an umbrella title for a course that brie introduces several research areas, all in some way related to computation and algorithms. These range from applied algorithmic techniques to more philo-sophical models. On one hand, the topics include mechanism design and game theory problems that are too dicult to solve on paper and therefore require a computer solver (the field of algorithmic mechanism design). On the other hand, we will also cover ways to predict the outcomes of learning and evolutionary processes, and problems where agents have restricted computational abilities or are themselves machines with open source code.

Grading:
There will be a few short assignments to motivate discussion. For example, submitting a strategy for a version of Axelrod tournament or finding what the strategies converge to. Given participation in class, I would not expect preparation to take more than 30-60 minutes per week.

- **Mechanism Design, (Laurent Mathevet) - Full Credit -ECO-AD-MCHDSGN**

Credits: 1

Professor: Prof. Laurent MATHEVET

Course objective:
Part 1. Foundations of Incomplete Information (4 classes)
1 CommonKnowledge and Rationality
1.1 Agree to Disagree
1.2 Email Game 2 Incomplete Information and Robustness
1.1 Harsanyi Type Spaces
1.2 (Bayes Nash) Equilibrium and Rationalizability
1.3 Bayes Correlated Equilibrium
Part 2. Information Design (10 classes)
1 Basics
1.1 Formulation Taneva (2019).
1.2 Comparison to Cheap Talk Crawford and Sobel (1982).
1.3 Dynamic foundation of commitment Mathevet, Pearce, and Stacchetti (2018).
1.4 Bayesian Persuasion Kamenica and Gentzkow (2011) Lipnowski and Mathevet (2018) (psychological audience).
2 ManyPlayers
2.1 Direct-revelation approach Taneva (2019).
2.2 Belief-based approach Mathevet and Taneva (2020).
2.3 Adversarial selection Mathevet and Taneva (2020) Morris, Oyama, and Takahashi (2020).
3 Selected Topics 3.1 Sequential information design Doval and Ely (2020)
3.2 Information Design by an Informed Designer Koessler and Skreta (2021)
3.3 Persuasion via Weak Institutions Lipnowski, Ravid, and Shishkin (2020)
3.4 Persuasion with Limited Communication Capacity Le Treust and Tomala (2019)
3.5 Preparing for the Worst But Hoping for the Best: Robust (Bayesian) Persuasion Dworczak and Pavan (2020)
3.6 Attention Management Lipnowski, Mathevet, and Wei (2020) 3.7 Organized Information Transmission Mathevet and Taneva (2020)
3.8 Online Privacy and Information Disclosure by Consumers Ichihashi (2020)

Teaching Block 4

- **Development Economics and Global Health, (Alessandro Tarozzi) - Full Credit - ECO-AD-DEVECOHEA**

  Credits: 1
  Professor: Prof. Alessandro TAROZZI
  Course objective:
  20 hours. The course will cover a number of topics in Development micro-economics, with a focus on Global Health and Gender in low and middle-income countries (LMICs).

  Grading:
  The evaluation will be based on problem sets, a referee report for a recent unpublished paper and an in-class presentation.

- **The Econometrics of Real Data, (Thomas Crossley) - Full Credit - ECO-AD-MTRCDATA**

  Credits: 1
  Professor: Prof. Thomas CROSSLEY
  Course objective:
  A 20 hour course on problems that arise in micro data, and tools to deal with those problem.
  Grading
  There will be graded data assignments worth 50 % and a final project worth 50 %.

- **International Macroeconomics, (Giancarlo Corsetti) - Full Credit -ECO-AD-INTMACECO**

  Credits: 1
  Professor: Prof. Giancarlo CORSETTI
  Course objective:
  The primary goal of this course is to provide the foundations of the core general equilibrium models of the international business cycles and the international financial system. Building on this core model, the lectures will introduce students to frontier theoretical and empirical work on trade, market structure, macroeconomics of capital market integration, sovereign risk and macroeconomic and monetary stability. Students will be assessed on an assignment requiring some analytical and/or quantitative work; and
  a referee report on a paper requiring them to map the contribution in the literature, discuss methodology and identify open issues. The website includes math-lab code for some of the models. Course readings will be provided during lectures. Standard reference books are Open Economy Macroeconomics (henceforth, OEM) by Martin Uribe and Stephanie Schmitt-Grohe and Foundations of International Macroeconomics by Kenneth Rogoff and Maurice Obstfeld.

  Grading
  The grading will be based on a class presentation of a paper with a written referee report and a research proposal. Two modes are available: presentation-mode involves the following weights 60% presentation and report 40% research proposal; research-mode 40% presentation and report 60% research proposal.

- **Liquidity Traps and Secular Stagnation, (Edouard Challe) - Half Credit -ECO-AD-LIQTRPS**

  Credits: 0,5
  Professor: Prof. Edouard CHALLE
  Course objective:
  This half-credit course covers models of the liquidity trap and secular stagnation. We will examine the potential sources of shocks and transmission mechanisms pushing an economy into the liquidity trap (financial frictions, deleveraging, precautionary savings, confidence...), as well as the "unconventional" policies (Forward Guidance, Quantitative Easing, Unconventional Fiscal Policy...) that can lift aggregate demand when conventional monetary policy fails. Finally, we will turns to models of secular stagnation,
  wherein the liquidity trap becomes very persistent or even permanent.

  Grading:
  Grading will be based on an in-class presentation (50%) and a referee report (50%).

- **Frontiers of Macro-Labor, (Cristina Lafuente Martinez) - Half Credit - ECO-AD-FRNTMACLB**

  Credits: 0,5
  Professor: Lecturer Cristina Martinez Lafuente (Max Weber Fellow)
  Course objective:
  This course gives an overview on the topics that constitute the frontier of research on labour markets in macroeconomics. The first block focuses on unemployment dynamics while the second focuses on wage dispersion. The aim of the course is to familiarize students with these topics so that they can follow specialist seminars, pursue related research projects and incorporate aspects of this field into their own research. In particular, the course aims to provide students with a critical understanding of the main puzzles, models, assumptions and empirical findings of modern labour economics. The emphasis is placed on empirical evidence and its implications for theory.

  Grading:
  Take home exam (essay based). It will be similar to the weekly assignments, but graded.

- **Topics in Information Design under Constraints, (Daniel Monte) - Half Credit - ECO-AD-INFDSGNCN**

  Credits: 0,5
  Professor: Fernand Braudel Fellow - Prof. Daniel Monte

  Course objective:
  This is an advanced course in economic theory. We will cover information design under constraints with a focus on the dynamic aspects of information design.

  Grading:
  The grading will be based on a class presentation of a paper with a written referee report and a research proposal. Two modes are available: presentation-mode involves the following weights 60% presentation and report 40% research proposal; research-mode 40% presentation and report 60% research proposal.

- **Social networks in economic environments, (Fernando Vega Redondo) - Half Credit - ECO-AD-NTWKTHR**

Credits: 0,5
Professor: Prof. Fernando VEGA-REDONDO
Course objective:
1. Introduction
a. A multidisciplinary field: examples from various areas
b. Preliminaries
i. The setup and network representation
ii. Basic network measures
c. Social networks in the real world
i. Small worlds
ii. Heterogenous contexts
iii. Cohesive structures
d. Network closures
i. Triadic closure
ii. Homophily
iii. Peer effects

2. Three paradigmatic network phenomena
a. Behavioral diffusion
i. Modeling diffusion
ii. Diffusion and network density
iii. Diffusion and cascade capacity
b. Social learning: DeGroot Model
i. Social learning on a social network
ii. Network-based characterization of long-run learning
iii. Social learning and the “wisdom of crowds”
c. Matching: networks, and markets
i. Perfect matching and the Matching Theorem
ii. Matching and optimality
iii. Matching and market equilibrium
1. Existence of equilibrium: DGS algorithm
2. Optimality of equilibrium: matching & the invisible hand

- **Organizational Economics, (Zeinab Aboutalebi) - Full Credit - ECO-AD-ORGECON**

Credits: 1
Professor: Prof. Zeinab ABOUTALEBI
Course objective:
This course is intended to introduce you to various topics in Organizational Economics with the goal of developing a deeper understanding of incentives and organisation in economics, and their influence on economic activity. The course intends to provide you with conceptual and theoretical frameworks that have wide applicability, with an eye toward applying these frameworks to understand observable phenomena, guide strategy and inform policy. We start by reviewing agency theories of organisational economics (Incentive contracts, Relational contracts and Career Concerns). We then move to study within firm's organisation. We start with a study of decision making in organisations (Team Formation Theories, Authority and Power etc.). We then proceed to a study of employment in organisations (Pay for Performance, Feedback and Communication etc.). Finally we will look at structures and processes in organizations (Models of hierarchy, Delegation etc.). Along with lecture notes, there is two recommended textbooks to obtain an overview of the topic and there is further references for each section. The references are divided into four sections that roughly correspond to what I very optimistically hope to cover in the lectures.

Grading:
Students are required to have in-class presentations of papers from the syllabus and to discuss papers presented in the class by others. A separate list of papers from which students can choose the papers will be uploaded. Students can also suggest papers for their presentation but I will have to approve it. The presentation will have 20% weight in the final assessment. There will be a take-home final exam worth 80% of your grade.