

NEW COURSES IN THE “POLIS” PATHWAY STARTING FROM THE ACADEMIC YEAR 2010-11 for students registered in fall 2010

Students who register at the first year in fall 2010 will attend the courses listed in the following tables. Note that, whereas the first year courses remain unchanged, only some of the second year courses that will start in 2011-12 are new.

Contents of the new second year courses – those marked * -- are reported after the tables.

ECONOMICS AND PUBLIC POLICIES - POLIS (LM-56), A.Y. 2010-11

YEAR 1

COURSE	CREDITS
Quantitative Methods for Economics II	9
Statistics for Economics	9
Economic and Social History	6
Microeconomics II	9
Public Economics II	9
Law and Economics	6
Commercial Law <i>or</i> Labour Law	6
Elective course	8
Total credits year 1	62

YEAR 2

COURSE	CREDITS
Economics of Risk and Incentives*	6
Management and Organization A: Statistical Data Analysis*	6
Management and Organization B: Behavioral Economics and Finance*	6
Dynamic Models for Macroeconomics*	6
Microeconomic Choices A: Microeconomic Policy Analysis *	6
Microeconomic Choices B: Game Theory and Political Choices*	6
Scientific Seminars	1
Thesis	21
Total credits year 2	58
TOTAL CREDITS	120

CONTENTS OF THE SECOND YEAR COURSES

ECONOMICS OF RISK AND INCENTIVES

This course presents the problems of choice under uncertainty and risk, which are relevant in many fields, spanning from private and public finance to insurances, management and labour market. Problems of asymmetry of information and of opportunistic behaviour are then studied through the principal-agent model, in order to develop a useful background for designing incentives and specifying effective contractual models.

Topics specifically examined are:

1. Choices under uncertainty and risk according to the expected utility approach and with reference to the recent debate on the subject
2. Asymmetric information, adverse selection, moral hazard
3. Self-selection and signalling, with particular reference to the insurance field

MANAGEMENT AND ORGANIZATION A: STATISTICAL DATA ANALYSIS

1. Probability Theory:
 - a. Introduction to probability computation
 - b. Introduction to theory of random variables
 - c. Multiple random variables
 - d. Introduction to models for discrete and continuous random variables
 - e. Limit Theorems for random variables
2. Statistical Inference:
 - a. Introduction to random sampling and sampling distribution
 - b. Introduction to estimation theory
 - c. Least square and maximum likelihood method
 - d. Introduction to non parametric and parametric Test

MANAGEMENT AND ORGANIZATION B: BEHAVIORAL ECONOMICS AND FINANCE

1. Theory and Experiments
2. Individual choices under risk and uncertainty: experiments and theoretical developments in non-expected utility theory
3. Intertemporal choice
4. Emotions and choice
5. Fairness and social preferences
6. Finance and investment behaviour

DYNAMIC MODELS FOR MACROECONOMICS

1. Solow-Swan exogenous growth model
2. Sustained growth models: the *AK* model and the role of human capital
3. Introductory deterministic intertemporal optimization techniques in continuous time
4. Optimal growth: the Ramsey-Cass-Koopmans model
5. One and two-sector endogenous growth models with human capital and technological change

MICROECONOMIC CHOICES A: MICROECONOMIC POLICY ANALYSIS

1. Microeconomic analysis for public policy
2. Efficiency and equity
3. Market, public intervention and alternative systems of resources allocation
4. Market failure: public goods, externalities, information asymmetry, marginal decreasing costs
5. Commons
6. Instruments for public policies: taxes, subsidies, voucher, ration coupons, direct regulation, licenses, permits etc.
7. Tournaments and threshold definition
8. Public policy and agents' behavior
9. Case studies in environmental social and health economics and policy
10. The evaluation of public policy
11. Cost-benefits analysis
12. Mechanism design

MICROECONOMIC CHOICES B: GAME THEORY AND POLITICAL CHOICES

The course is made of two self-contained parts, game theory and public choice theory. Game theory deals with choices made in strategic contexts, *i.e.*, when there is more than one decision-maker, and the choice of each affects the payoffs of the others. Each decision-maker, when making her choice, must take into account what the others will presumably do. The most famous example is the prisoner's dilemma. The theory applies mostly to bargaining, norm-based behaviors, conflict theory, and spontaneous cooperation.

Public choice theory studies the cases when a decision to be taken requires the consent of several subjects, each with her own preferences and constraints. Several non obvious consequences arise. We will study some theoretical results (the most famous is Arrow's impossibility Theorem), and their applications to political behavior, to the problem of the choice of the electoral system, to the power distribution, and to other similar topics.