PH.D. IN ECONOMICS, STATISTICS, AND SUSTAINABILITIY
(PROGETTO PER IL XXXIV CICLO)
programma provvisorio al 17.4.19

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MATH SEQUENCE

ADVANCED LINEAR ALGEBRA  (Prof.ssa S. Corsaro; Prof. P. De Angelis)


Selected references: TBA

CFU: 6 (24 ore)

AN INTRODUCTION TO DYNAMIC OPTIMIZATION  (Prof. G. De Marco)


CFU: 4 (16 ore)

R: STRENGTHS AND WEAKNESSES (Prof. U. Fiore)

Course Outline: The module is aimed at providing a practical outline of the aspects that make learning and using R worthwhile, as well as a warning about elements that require attention if one wants to produce quality code. Themes will include the foundations on functional programming, the merits of the integrated development environment, and the availability of a massive set of package


CFU: 2 (8 ore)

STATISTICS – ECONOMETRICS SEQUENCE

STATISTICS AND R LABORATORY (Prof.ssa A. D’Agostino)

Course Outline: Inference (point estimation, confidence intervals, statistical hypothesis testing). Maximum likelihood estimation methods. Introduction to R. Elementary R programming, Data visualization in R, Manipulate and process data in R.

Selected references: TBA

CFU: 2 (8 ore)
APPLIED MULTIVARIATE STATISTICAL ANALYSIS (Prof.ssa M. Rosciano)
Selected references: TBA.
CFU: 2 (8 ore)

SAMPLE SURVEYS: PRINCIPLES, METHODS AND APPLICATIONS (prof. G. Punzo)
Selected references: TBA
CFU: 2 (8 ore)

ADVANCED MODELING IN STATISTICS (Prof. A. Regoli; Prof. S. Longobardi)
Selected references: TBA
CFU: 2 (8 ore)

COMPOSITE INDICATORS METHODOLOGY (Prof. R. Castellano; Prof. A. Rocca)
Course Outline: The course discusses the definition and the methodology of composite indicators. Selecting variables, multivariate analysis, normalization of data, weighting and aggregation, robustness and sensitivity
Selected references: TBA
CFU: 2 (8 ore)

TIME-SERIES ANALYSIS (Prof. De Luca; Prof.ssa G. Rivieccio)
Selected references: TBA.
CFU: 2 (8 ore)
AN INTRODUCTION TO SPATIAL ECONOMETRICS (Dott. M. Agovino)


Selected references: TBA.

CFU: 3 (12 ore)

FINANCE SEQUENCE

QUANTITATIVE FINANCE (Prof.ssa Z. Marino)


CFU: 2 (8 ore)

ADVANCED QUANTITATIVE METHODS IN FINANCE (Prof.ssa F. Perla)


CFU: 2 (8 ore)

CORPORATE FINANCE (DOTT. C. M. Coletta)

Course Outline: TBA

Selected references: TBA

CFU: 2 (8 ore)

RISK MANAGEMENT (DOTT. P. Bergamaschi)

Course Outline: TBA

Selected references: TBA

CFU: 1,5 (6 ore)
ASSET PRICES IN DSGE MODELS (Prof. F. Busato – Dott.ssa M. Ferrara)

Course Outline: The relation between macroeconomic fundamentals and the cross section of asset returns is studied through the lens of dynamic stochastic general equilibrium (DSGE) models with attention to financial frictions


CFU: 2 (8 ore)

ECON SEQUENCE

MICROECONOMIC THEORY (Prof. L. Aldieri)


Selected references: TBA

CFU: 3 (12 ore)

GAME THEORY (Prof. B. Chiarini)

Course Outline: Bayesian Equilibrium; Perfect Bayesian Equilibrium; Signaling Games (games with perfect information are taken for granted)

Selected references: M. Osborne, An Introduction to Game Theory, Oxford. B. Chiarini, Un Mondo in Conflitto, Mondadori. Osborne and Rubinstein, A course in game theory, MIT

Selected references: TBA

CFU: 2 (8 ore)
BUSINESS CYCLES AND FINANCIAL CYCLE (Prof.ssa E. Marzano);

Course Outline: the course is an introduction to the interactions between the financial and the real side of the economy, in terms of empirical regularities (dating, synchronization, comovement) and macroeconomic implications of financial frictions.

Selected references: TBA

CFU: 3 (12 ore)

MACROECONOMIC THEORY (Prof. Francesco Busato; Prof.ssa Maria Ferrara)

Course Outline: The course consists of two sections. The first one provides the basic analytical tools to set-up and solve a neoclassical growth model (i.e. Ramsey-Cass-Koopmans model). The second section introduces to the use of DYNARE in MATLAB. The course is a “laptop only” one and the software needed are MATLAB and DYNARE. Course material will be provided during the classes. Section 1: Introduction to the Ramsey-Cass-Koopmans Model, Model assumptions, Model optimality conditions, Calibration, Model steady state; Section 2: Introduction to Dynare, The structure of a .mod file, Writing in Dynare, Simulations and rationalizing Impulse Response Functions.

Selected references: TBA

CFU: 3 (12 ore)

MACROECONOMIC STABILITY AND FINANCE (Prof. E. Marchetti)

Course Outline: The course offers an introduction to some relevant “non-mainstream” topics in current macroeconomic theory, centered on the general issue of the intrinsic instability of market economies. The programs is organized into three Sections. Section 1: discussion of the current “consensus” approach (NK-DSGE), focusing on the role of self-fulfilling expectations. Section 2: the financial system as a channel for macroeconomic instability. Section 3: the role of asset-price bubbles in deep recessions, great crises and other “extreme” macroeconomic episodes.


CFU: 2 (8 ore)

GROWTH THEORY (Prof. C. P. Paolo Vinci).

Course Outline: TBA

Selected references: TBA

CFU: 1 (4 ore)
DSGE MODELS AND BAYESIAN ESTIMATIONS IN DYNARE (Dott. A. Argentiero).
Course Outline: TBA
Selected references: TBA
CFU: 3 (12 ore)

FINANCIAL CRISIS IN A LONG TERM PERSPECTIVE - ENERGY AND ECONOMIC GROWTH (Prof.ssa S. Bartoletto)
Course Outline: the course provides a quantitative history of financial crises: debt crises, credit crises, inflation, currency crises; the bursting of asset price bubbles (equity or real estate) and the role of macroeconomic conditions in the run-up to financial crises.
Selected references: TBA
CFU: 2 (8 ore)

LABOR ECONOMICS (Prof. A. Garofalo; Dott.ssa K. Marchesano)
Selected references: TBA
CFU: 2 (8 ore)

INTRODUCTION TO TREATMENT EFFECTS AND POLICY EVALUATION WITH APPLICATIONS TO INNOVATION POLICIES (Dott. P. Piselli).
Course Outline: This is a short course of Causal inference with observational data. Problems with inferring causal relationships from non-experimental data are briefly reviewed and some classes of methods designed to allow estimation of and inference about causal parameters are described: panel regression, difference in difference, matching, instrumental variables and regression discontinuity. Practical examples are offered, and discussed basically with application to the effects of policies to promote R&D and innovation activities of firms.
Selected references: TBA
CFU: 1 (4 ore)
SUSTAINABILITY SEQUENCE

EXPERIMENTAL ECONOMICS (Prof. R. Vecchio)

Course Outline: The course is intended to guide PhD students in the comprehension of experimental economics mechanisms and their underlying rationale. In particular, the course will focus on two of the most frequently applied incentive-compatible value elicitation mechanisms: non-hypothetical experimental auctions and multiple price-list experiments.


CFU: 1 (4 ore)

ECONOMICS OF FOOD SYSTEM AND SUSTAINABILITY (Prof.ssa A. Annunziata)

Course Outline: The modern agro-food system in the sustainability context; The global food paradoxes; New trends in food demand; Effects of asymmetric information on consumer food choices; Determinants of sustainable food consumption; Food labeling and certification schemes for sustainability; Food sustainability index.

Selected references: TBA.

CFU: 3 (12 ore)

CLIMATE FINANCE FOR ENERGY SUSTAINABILITY (Prof. G. Scandurra)

Course Outline: The course aims to introduce students to methods for assessing the effectiveness of climate finance to promote the green growth and energy sustainability in developed, developing and Last Developing countries. The course will focus on the economic instruments, identified at international level, to be put in place and implemented in order to encourage: a) investments in Renewable sources; b) green growth; c) energy efficiency. Moreover, will be introduced the statistical indicators to assess the impacts of planned interventions and the most common statistical methodologies for analyzing the impacts these interventions.

Selected references: Scandurra, G., Romano, A., Carfora, A., Ronghi, M., 2017. Climate Finance as an Instrument to Promote the Green Growth in Developing Countries. SpringerVerlag, Berlin. ISBN 978-3-319-60710-8, DOI: 10.1007/978-3-319-60711-5 Scientific papers will be suggested.

CFU: 2 (8 ore)

INTERNATIONALIZATION AND FOOD COMPANIES (Prof. F. Boccia)


Selected references: TBA.
SPECIAL TOPICS

INTRODUCTION TO MACHINE LEARNING (Prof. U. Fiore)

Course Outline: The module is aimed at providing an introductory outline of Machine Learning, also focusing on the design of experiments. A brief description of neural networks and Deep Learning will also be included. Hints to applications in the realm of Economics and Finance will be given.


CFU: 1 (4 ore)

First year Classes and exams end October 30th 2020.