Anno Accademico 2018/2019

APPLIED QUANTITATIVE ECONOMICS	
Enrollment year	2017/2018
Academic year	2018/2019
Regulations	DM270
Academic discipline	SECS-P/01 (POLITICAL ECONOMY)
Department	DEPARTMENT OF ECONOMICS AND MANAGEMENT
Course	ECONOMICS, FINANCE AND INTERNATIONAL INTEGRATION
Curriculum	Finance
Year of study	2°
Period	1st semester (24/09/2018 - 21/12/2018)
ECTS	6
Lesson hours	44 lesson hours
Language	English
Activity type	WRITTEN AND ORAL TEST
Teacher	ASCARI GUIDO (titolare) - 6 ECTS
Prerequisites	Good knowledge of macroeconomics and basic knowledge of time-series econometrics are required.
Learning outcomes	At the end of the course, the students should be able to understand the economics reports and economics projections report published by central banks, international organizations and private consultancies. The students should be able to understand the methodologies used in those publications and reproduce some of them. The student should be able to simulate basic stochastic dynamic macroeconomic models.
Course contents	The course is divided in 2 parts. The first part of the course purports to examine the various techniques and methodologies currently used by business cycle analysts in assessing and forecasting the short-run dynamics of economic activity. First, the theory: we will analyze a dynamic theoretical IS-LM model to study how both current monetary and fiscal policy and the market expectations about future monetary and

fiscal policy affect the stock prices, the bond market and the yield curve. Then, the application. We will: illustrate the most recent dynamics of the world economy and problems; present the type of information and indicators available for business cycle projections.

The course will also host analysts and professionals who will highlight their own methodology or field of studies.

The main topics of this part are:
• importance of dynamics in interpreting macroeconomic data and facts;
• definition, measures and theories of economic fluctuations;
• data and indicators available for analyzing the short run behaviour of economic systems
• time –series econometric techniques and methodologies for assessing and forecasting business cycles
• examination of the most common short-run business-cycle reports and forecasts by international organizations and national research centers
• analysis of the current and perspective short-run dynamics of the world economy, the Eurozone and the Italian economic system

The second part of the course deals with solving and simulating dynamic structural models of the business cycle. We will start with the basic real business cycle model, develop the theory behind it and then perform, using MATLAB and DYNARE, a stochastic simulations, to judge its ability to reproduce the business cycle facts.

Teaching methods	The theoretical coverage of all topics through standard lectures will be supplemented by practical applications regarding econometric tools for estimation and forecasting and simulation toolbox to simulate (and estimate) dynamic macroeconomic models of business cycle. Each student will need her/his laptop PC to individually carry out the relevant computations under the teacher's supervision.
Reccomended or required readings	There is no single text or book. Various papers and economics reports by various organizations will be the specified during the course.
Assessment methods	Home work. The student will be asked to replicate an existing scientific paper or economics short-run report and projections, producing a short written essay.
Further information	
Sustainable development goals - Agenda 2030	$lbl_legenda_sviluppo_sostenibile