

**Allegato B2****Quadro degli obiettivi formativi specifici e delle propedeuticità**

Corso di Laurea magistrale in ECONOMICS/SCIENZE ECONOMICHE

Rau, art. 12, comma 2, lettera b

Classe LM-56, Scienze dell'economia

N.	Insegnamento	Settore SSD		Obiettivi formativi specifici	Propedeuticità obbligatorie*
1	<b>Advanced Mathematics</b>	SECS-S/06		Aim of the course is to provide students with the advanced quantitative knowledge to study economics in a formal way. More specifically the course covers topics such as (but is not limited to) functions of more variables, differential calculus, optimization problems with and without constraints. All of the above instruments are widely used in economic analysis.	
2	<b>Public Economics</b>	SECS-P/03		<p>The course is rooted in a theoretical and applied framework aimed at understanding the economic justification of the role of the state in the market economy, already outlined in previous courses. The course of Public economics starts with a first part dedicated to the economic theory of taxation and public finance, providing a micro- and a macro-economic framework for discussing the impact of alternative taxes and instruments of public finance on the economy.</p> <p>The second part of the course analyzes the main sectors on which the state plays a role as a regulator, a direct producer or a financier. More in particular, the course analyzes the welfare state and its main components (health, social security, education, pensions, housing), network utilities (electricity, natural gas, water and solid waste)</p> <p>Both parts are developed integrating mainstream economics with institutional economics and adopt a comparative approach focused on OECD member states.</p>	
3	<b>Labour Market Law</b>	IUS/07		The course has the following learning aims: integration of the basic knowledge of the legal framework of labour law contract (employment or autonomous) and the right of coalition. More specifically, we want to provide expertise and qualified on issues related to the protection of the worker in the job and/or in the labor market (public and private services), to the European social dialogue, on the free movement of workers within the Community and access to employment of no EU citizens.	
4	<b>Financial Intermediaries and Financial Markets</b>	SECS-P/11		<p>The aim of the course is to provide the foundations of the financial system, its main functions and its relations with the real economy. The course is divided into two modules.</p> <p>The first module sets down the conceptual framework, evidencing the linkages between financial economy and real economy. Here, the basic features of financial markets and institutions will be presented, alongside and analysis of the channels efficiently linking savings and investments.</p> <p>The second module is aimed to provide the basic knowledge about the institutional framework of central banking and monetary policy. The module analyses the process through which base money is created and the relations between money and the supply of credit. Here, the aim is to provide knowledge on the role of the financial system (and,</p>	

				in particular, the banking system) in the transmission mechanism of monetary policy.	
5	<b>Advanced Microeconomics</b>	SECS-P/01		Economic models must carefully identify decision makers, goals, choices and relationship between choices and outcomes. Aim of the course is to make students accustomed to this way of modeling the behavior of economic agents and their optimization problem. In particular the course will cover consumer theory and utility maximization, theory of the firm in perfectly competitive markets, monopoly, oligopoly theory. The course provides students with basic knowledge of and game theory and information economics.	
6	<b>Development Economics</b>	SECS-P/06	<i>Conoscenza e comprensione</i>	Learning the fundamental notions of development economics by studying the Harrod-Domar model, the Solow-Swan model, the Ramsey-Cass-Koopmans model, and endogenous growth models.	
			<i>Capacità di applicare conoscenza e comprensione</i>	Being able to understand the key features of development and growth.	
			<i>Autonomia di giudizio</i>	Understanding critically the complexity of economic phenomena.	
			<i>Abilità comunicative</i>	Being able to explain the economic phenomena by also using analytical models.	
			<i>Capacità di apprendimento</i>	Being able to use the concepts of development economics to continue the study of other subjects in a rigorous way.	
7	<b>Advanced Macroeconomics</b>	SECS-P/01	<i>Conoscenza e comprensione</i>	Learning the fundamental notions of advanced macroeconomics by studying neoknesian models and some basic models based on the rational expectation hypothesis.	
			<i>Capacità di applicare conoscenza e comprensione</i>	Being able to understand the key features of markets and economic systems.	
			<i>Autonomia di giudizio</i>	Understanding critically the complexity of economic phenomena.	
			<i>Abilità comunicative</i>	Being able to explain the process of economic phenomena by using analytical models.	
			<i>Capacità di apprendimento</i>	Being able to use the concepts of advanced macroeconomics to continue the study of other subjects in a rigorous way.	
8	<b>Advanced Econometrics</b>	SECS-P/05		The course is aimed to the description of advanced microeconometrics tools, usefull to analyse complex data structures and contexts. Particularly lessons are firstly devoted to hierarchical data structures and their analysis through Linear Mixed Models (LMM) or multilevel models. Then models with not normal response are deepened within the unified approach of Generalized Linear Models (GLM). In the last part of the course these extensions towards mixed effects (LMM) and towards not normal responses are merged within the contexts of Generalized Linear Mixed Models (GLMM).	
9	<b>Time Series Analysis</b>	SECS-S/01	<i>Conoscenza e comprensione</i>	The course unit aims to raise awareness of the statistical knowledge applied to financial time series analysis. In particular, students can develop the skills necessary to develop an empirical analysis of the time series deriving from the financial market.  After a brief preface, we will focus on four main arguments: 1. Univariate time series analysis: - ARIMA models - Seasonal ARIMA models 2. Threshold linear models	

				<ul style="list-style-type: none"> <li>- Threshold AutoRegressive (TAR)</li> <li>- Self-Exciting TAR (SETAR)</li> <li>- Smooth Transition AR (STAR)</li> <li>- Logistic STAR (LSTAR)</li> <li>- Markov-Switching Models (MSW)</li> </ul> <p>3. Conditional Heteroskedasticity models</p> <ul style="list-style-type: none"> <li>- ARCH</li> <li>- GARCH</li> </ul> <p>4. Artificial Neural Networks (ANN)</p>	
			<i>Capacità di applicare conoscenza e comprensione</i>	The topics faced during the semester introduce the time series statistical tools students can use during the degree courses and in the working framework.	
			<i>Autonomia di giudizio</i>	<p>The course supplies the students with advanced tools for time series analysis in the financial market framework.</p> <p>At the end of the course unit, the students will be able to:</p> <ul style="list-style-type: none"> <li>- distinguish and evaluate the different kinds of time series;</li> <li>- develop a preliminary analysis of the data;</li> <li>- recognise the informative contents of a given dataset;</li> <li>- decide which model is the best for the specific observed data patterns;</li> <li>- apply the main time series models and also consider some specific extensions (e.g. threshold models);</li> <li>- use the software R for the time series analysis.</li> </ul>	
			<i>Abilità comunicative</i>	The group work activities aim at developing students' communication skills using the ability to summarise the information based on statistical summary statistics, graphical tools and advanced statistical models.	
			<i>Capacità di apprendimento</i>	The students will be able to apply the optimal statistical tool given a specific empirical framework. The skills developed during the teaching can be easily applied in other contexts to understand the quantitative analyses' results.	
<b>10</b>	<b>Environmental and Resource Economics</b>	AGR/01	<i>Conoscenza e comprensione</i>	The course provides the students with comprehensive knowledge about theoretical approaches and methodological tools from a political economics point of view in a perspective of sustainable development. The evolution of environmental and ecological economics related to pollution problems, environmental/ecosystem services and natural resources management will be illustrated.	none
			<i>Capacità di applicare conoscenza e comprensione</i>	The course aims to enable students to acquire specialized knowledge and understanding of selected aspects, approaches and methods to manage natural resources according to sustainability.	
			<i>Autonomia di giudizio</i>	To be able to process the acquired knowledge. To develop critical capacity towards each element of the course, in order to transfer similar capacity into real-decision making contexts.	
			<i>Abilità comunicative</i>	Being able to understand and be able to use the notions conveyed. Use the rigour of economic reasoning also in communication.	
			<i>Capacità di apprendimento</i>	To be able, in an autonomous manner, to apply the acquired knowledge and methodology in real-life decision-making environments in order to include environmental issues and related economic aspects in decision-making reasoning.	
<b>11</b>	<b>Industrial Organization</b>	SECS-P/01	<i>Conoscenza e comprensione</i>	The course presents a rigorous investigation of different forms of interaction among firms and of different market structures, using game	

				theoretical tools. Equilibrium concepts associated with different market structures are systematically compared from the point of view of Pareto-efficiency criterion.	
			<i>Capacità di applicare conoscenza e comprensione</i>	Being able to understand the key features of markets.	
			<i>Autonomia di giudizio</i>	Understanding critically the complexity of economic phenomena.	
			<i>Abilità comunicative</i>	Being able to explain the process of economic phenomena by using analytical models.	
			<i>Capacità di apprendimento</i>	Being able to use the concepts of industrial organization to continue the study of other subjects in a rigorous way.	
12	<b>Political Economy</b>	SECS-P/01	<i>Conoscenza e comprensione</i>	Learning the fundamental notions of political economy by studying modern general equilibrium theory.	
			<i>Capacità di applicare conoscenza e comprensione</i>	Being able to understand the key features of markets and economic systems.	
			<i>Autonomia di giudizio</i>	Understanding critically the complexity of economic phenomena.	
			<i>Abilità comunicative</i>	Being able to explain the process of economic phenomena by using analytical models.	
			<i>Capacità di apprendimento</i>	Being able to use the concepts of political economy to continue the study of other subjects in a rigorous way.	
13	<b>Accounting and Management for Sustainable Businesses</b>	SECS-P/07		<p>The course explores the principles for managing and accounting intangible resources such as intellectual capitals, as well as for social and environmental aspects. It presents the main models for non-financial reporting, analyzing the role such disclosure plays in the long-term sustainable strategies of businesses in different sectors and contexts.</p> <p>The course aims to enable students to critically analyze the need for managing and accounting for economic, social, and environmental sustainability, as well as to assess sustainable reports and devise a diagnosis and intervention strategy to implement non-financial reporting in firms of various size, industry, and complexity.</p>	
		SECS-P/08		<p>The aim of the course is to develop students' knowledge about the fundamental concepts of doing business according to a sustainable perspective with particular reference to:</p> <ul style="list-style-type: none"> <li>• the strategic dimension of sustainable business;</li> <li>• the marketing perspective;</li> <li>• the relationship between innovation and sustainability;</li> <li>• the implications in terms of internationalization.</li> </ul> <p>At the end of the course the student should be able to:</p> <ul style="list-style-type: none"> <li>• understand the challenges for sustainable businesses;</li> <li>• apply theories and practices to concrete business cases;</li> <li>• assess the drivers of firms' effective sustainable behaviors</li> </ul>	
14	<b>Economics and Policy of Ecological Transition</b>	AGR/01	<i>Conoscenza e comprensione</i>	The course provides the elements for understanding the driving forces and the implications of the transition towards a carbon-free economy and discuss the constraints that may hinder and the economic policy approaches that may facilitate it. The course will provide the key concepts underlying the transition (e.g. green	none

				economy, circular economy, bioeconomy, sustainable development) and the approaches for their assessment. It will integrate the perspective of applied environmental economics with the discussion of the key institutional aspects. The transition towards a sustainable and decarbonized economy will be analyzed in its implications from a national as well European and global perspective.	
			<i>Capacità di applicare conoscenza e comprensione</i>	The course aims to enable students to acquire specialized knowledge and understanding of selected aspects, approaches and methods to manage economic activities towards the ecological transition.	
			<i>Autonomia di giudizio</i>	To be able to process the acquired knowledge. To develop critical capacity towards each element of the course, in order to transfer similar capacity into real-decision making contexts.	
			<i>Abilità comunicative</i>	Being able to understand and be able to use the notions conveyed. Use the rigour of economic reasoning also in communication.	
			<i>Capacità di apprendimento</i>	To be able, in an autonomous manner, to apply the acquired knowledge and methodology in real-life decision-making contexts and in different economic activities in order to support the process towards sustainability.	
<b>15</b>	<b>Sustainable Development Law</b>	IUS/05		<p>The course aims to examine the main aspects relating to the notion of sustainable development, analyzing the related international, European and internal legal sources.</p> <p>The relationship between law and sustainability will be explored, and the three factors on which to measure sustainability will then be analysed: namely the Environment factor (climate change, natural resources and energy, pollution and waste, sustainable transport), the Social factor (human capital, product liability, stakeholder opposition, social opportunities) and the Governance factor (Corporate Governance - board diversity, executive compensation system, ownership and control - as well as corporate behavior - professional ethics, anti-competitive practices, corruption and instability of the financial system – i.e. the so-called ESG factors). Particular attention will be paid to sustainable finance, the concept of ethical banking, benefit companies and B-corps.</p>	

**\* va indicato il numero di riferimento dell' /degli insegnamento/i propedeutico/i a quello descritto.**

### **Nota**

Gli obiettivi formativi specifici dei corsi di insegnamento devono essere descritti mediante un testo compreso tra le 5 e le 10 righe, per un totale di battute comprese tra le 500 e le 1000.