Syllabus

Descrizione corso

Titolo insegnamento	Applied resource and energy economics
Codice insegnamento	27515
Titolo aggiuntivo	
Settore Scientifico-Disciplinare	SECS-P/05
Lingua	Inglese
Corso di Studio	Corso di laurea magistrale in Data Analytics for Economics and Management
Altri Corsi di Studio (mutuati)	
Docenti	
Assistente	
Semestre	Non definito
Anno/i di corso	2
CFU	6
Ore didattica frontale	36
Ore di laboratorio	-
Ore di studio individuale	-
Ore di ricevimento previste	18
Sintesi contenuti	COURSE NOT OFFERED IN 2025/2026 This course explores contemporary challenges in resource and energy economics, with a strong focus on climate change, energy markets, and the role of data-driven decision-making. Emphasis is placed on the use of high-dimensional and high-frequency data, structural modeling, and advanced econometric techniques—including high-dimensional regression and machine learning methods—to analyze commodity prices, electricity markets, and policy impacts. Students learn to translate economic theory into empirical models and to select and implement appropriate estimation techniques using real-world datasets.

	Applications include forecasting energy demand, evaluating the effects of climate-related shocks, and quantifying market dynamics. The course blends theory, data analysis, and policy evaluation, preparing students to address complex sustainability and energy issues using modern quantitative tools.
Argomenti dell'insegnamento	
Parole chiave	
Prerequisiti	
Insegnamenti propedeutici	
Modalità di insegnamento	
Obbligo di frequenza	Course not offered.
Obiettivi formativi specifici e risultati di apprendimento attesi	Knowledge and understanding: The student acquires specific knowledge of the economic and business domains of his/her interest and necessary to address decision-making and management issues in public and private organisations with an interdisciplinary perspective. In the Data Analytics for Economics pathway, knowledge will be oriented towards economic theory, economic analysis and econometrics through the development of micro- and macroeconomics, decision theory under conditions of uncertainty, time series analysis and forecasting techniques, methods for causal inference from both administrative and experimental data. Knowledge will also be oriented towards data analysis. In the Business Analytics track, the knowledge acquired will concern the tools necessary for analysing and interpreting business and organisational data, as well as business economic measurements, business models and their evolution, tools and techniques to support decision-making, performance measurement systems consistent with digitisation and sustainability processes, the governance of marketing processes, with particular regard to digital and interactive marketing and the impact of digitisation on marketing activities. Applying knowledge and understanding: Ability to analyse business issues that characterise data-driven decision support through the application of statistical and computational models. Ability to use and apply models for market analysis and economic

	policy formulation. Making judgements: Master's graduates will have the ability to apply the acquired knowledge to interpret data in order to make directional and operational decisions in an economic-business context. Master graduates will have the ability to apply the acquired knowledge to support processes related to production, management and risk promotion activities and investment choices through the organisation, analysis and interpretation of complex databases. Communication skills: Master's graduates will be able to communicate effectively in oral and written form the specialised contents of the individual disciplines, using different registers, depending on the recipients and the communicative and didactic purposes, and to evaluate the formative effects of their communication. Learning skills: "MSc graduates should be familiar with the tools of scientific research. They will also be able to make autonomous use of information technologies to carry out bibliographic research and investigations both for their own training and for further education. In addition, through the curricular teaching and the activities related to the preparation of the final thesis, they will be able to acquire the ability - to identify thematic connections and to establish relationships between methods of analysis and application contexts; - to frame a new problem in a systematic manner and to implement appropriate analysis solutions; - to formulate general statistical-econometric models from the phenomena studied.
Obiettivi formativi specifici e risultati di apprendimento attesi (ulteriori info.)	
Modalità di esame	
Criteri di valutazione	
Bibliografia obbligatoria	

Bibliografia facoltativa	
Altre informazioni	
Obiettivi di Sviluppo Sostenibile (SDGs)	