

COURSE OF STUDY: Statistics and methods for economics and finance
ACADEMIC YEAR: 2024-2025
ACADEMIC SUBJECT: Forecasting Models

General information	
Year of the course	2nd year
Academic calendar (starting and ending date)	1st term
Credits (CFU/ETCS):	8
SSD	SECS-S/03
Language	Italiano
Mode of attendance	Not mandatory but strongly recommended

Professor/ Lecturer	
Name and Surname	Vittorio Nicolardi
E-mail	vittorio.nicolardi@uniba.it
Telephone	+390805049201
Department and address	<i>Economics and finance</i>
Virtual room	https://www.uniba.it/it/docenti/nicolardi-vittorio
Office Hours (and modalities: e.g., by appointment, on line, etc.)	Wednesday 9:30 – 13:30 (in person)

Work schedule			
Hours			
Total	Lectures	Hands-on (laboratory, workshops, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
200	35	21	150
CFU/ETCS			
8	5	3	

Learning Objectives	
Course prerequisites	<i>The student should have adequate basic knowledge of multivariate methodological statistics, econometrics and economics.</i>
Teaching strategie	<ul style="list-style-type: none"> - Lectures on the theoretical topics of the course, with analysis of financial phenomena both at a microeconomic and macroeconomic level. - Practice with GRETl econometric software using the national (ISTAT) and European (EUROSTAT) online economic databases.
Expected learning outcomes in terms of	
Knowledge and understanding on:	<i>The student will be able to:</i> <ul style="list-style-type: none"> - use the methodological skills acquired during the course to identify and define the structure of financial markets; - perform scenario forecasts in relation to the financial market.
Applying knowledge and understanding on:	<i>The student will be able to:</i> <ul style="list-style-type: none"> - apply the knowledge acquired during the course to specific concrete cases that arise in the financial markets, both in public sectors and private sectors; - explanation of the economic phenomena linked to both individual and collective financial choices.
Soft skills	<i>The course aims to provide students with tools that allow them to:</i> <ul style="list-style-type: none"> - develop an exhaustive analysis capacity of financial phenomena; - interpret and communicate the results of the analyses to the market operators in relation to decisions and structural and cyclical interventions in the economic and financial sphere;

	<ul style="list-style-type: none"> - understand the nature of financial phenomena and develop the ability to apply the correct methodologies necessary to explain the phenomena themselves.
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Syllabus	
Content knowledge	<p><i>Part I: The econometric models.</i></p> <ul style="list-style-type: none"> - Economic theory, statistical data and econometric models. - The Backward shift operator. - Stationarity; memory and ergodicity. - Forecasts, innovations and linear projections. - Non-stationary processes. <p><i>Part II: Dynamic econometric models.</i></p> <ul style="list-style-type: none"> - Dynamic econometric models: concepts and definitions. - Exogeneity, causality, identification and specification. - Analysis of specification and validation of econometric models. - The dynamic multivariate regression model. <p><i>Part III: Systems of simultaneous equations.</i></p> <ul style="list-style-type: none"> - Systems of simultaneous equations. structural form and reduced form. - The problem of identification in systems of simultaneous equations. - Systems of simultaneous equations: VAR and VARMA models. - The estimation of systems of simultaneous equations: reduced form and structural form. - Instrumental variables. - Estimation methods with limited and complete information. - Test for overidentification.
Texts and readings	<ul style="list-style-type: none"> - Gardini A., Cavaliere G., Costa M., Fanelli L., Paruolo P. - <i>Econometria. Volume I</i>, Franco Angeli Editore, Milano 2014 (Capp. 1 e 5). - Gardini A., Cavaliere G., Costa M., Fanelli L., Paruolo P. - <i>Econometria. Volume II</i>, Franco Angeli Editore, Milano 2011 (Capp. 6 e 8 – escluso: VAR di cointegrazione in 8.3.1, par. 8.5). - Lecture notes.
Notes, additional materials	
Repository	Lecture notes and the practice materials are available by teachers in electronic format.

Assessment	
Assessment methods	The assessment of knowledge is made exclusively through an oral test, evaluating the theoretical knowledge on the course contents and the ability to evaluate the implications of the knowledge on the evaluations of the financial markets.
Assessment criteria	The student has to show a good knowledge of the topics addressed in the course. His capacity to explain topics and his accuracy in the use of the specific language of the discipline will also be evaluated.
Final exam and grading criteria	The exam is passed if the grade is greater than or equal to 18/30.
Further information	