

**ANKARA YILDIRIM BEYAZIT UNIVERSITY – DEPARTMENT OF FINANCE AND BANKING
COURSE SYLLABUS**

Course Code	Course Title	Course Type	ECTS Credits	Prerequisite Information	Date of Preparation
BF411	Time Series Analysis	Elective	5	Statistics I and II	22.10.2025
Instructor of the Course & E-Mail Address	Erhan Çankal ecankal@aybu.edu.tr				
Office Hours & Office Room	Thursday: 12:30 – 13:30				
Course Content and Objectives	Time series analysis has become one of the most crucial tools for authorities responsible for setting economic policies. To tackle practical problems, policymakers need to build empirical models and use these models efficiently. It is imperative to have the knowledge and skills to extract meaningful quantitative information from data that is limited in availability. This course is designed to provide the practical illustration of techniques used in applied macroeconometrics and finance.				
Textbook(s)	Gujarati, Damodar N. & Porter, D. C. (2009), Basic Econometrics, 5 th Ed., McGraw-Hill Asteriou, D. & Stephen G. Hall (2021), Applied Econometrics: A Modern Approach Using Eviews and Microfit. Brooks, Chris (2014), Introductory Econometrics for Finance, 3 rd Ed., Cambridge University Press. Class Notes.				
Teaching Methods and Techniques	(The teaching methods and techniques used in the course, such as homework, class discussions, and reading materials, should be listed here.)				
Course Learning Outcomes	1	To conceptualize the essential concepts of econometric analysis and modeling;			
	2	To understand the economic and finance concepts and use the econometric tools to analyze the relationships between the economic magnitudes;			
	3	To acquire skills and knowledge of econometric modeling and time series methods to handle models with time-variant variables;			
	4	Applying time series methods to relevant models to estimate the models and predict future values;			
	5	To acquire the methodological foundation necessary for advancement in a finance career.			
Program Outcomes Contributed by the Course	Program Outcomes (PO)				
		After completing the coursework, the students will be able to use the time series techniques on the relevant models and interpret the results. The students will gain knowledge and skills to apply specific time series methods to the macroeconomic and/or finance area. They will be able to use specific tests for the stationarity of the series, estimate models with time-variant variables, and extract meaningful results based on the conducted analyses.			
Contribution of the Course to Field Instruction					

Topics Covered in the Course	1. Week	Introduction to Econometric and Time Series Models	
	2. Week	Examining Time Series Visually	
	3. Week	Time Series Components	
	4. Week	Decomposing the Components of Time Series and Smoothing Techniques	
	5. Week	Stationarity and Unit Roots	
	6. Week	Estimating Models with Stationary Variables	
	7. Week	Non-stationarity	
	8. Week	Midterm Week	
	9. Week	Using Dummy Variables in Time Series Models	
	10. Week	Distributed Lag and Autoregressive Models	
	11. Week	Cointegration	
	12. Week	Error Correction Mechanism	
	13. Week	Macroeconometric Modeling	
	14. Week	Simultaneous-Equation Estimation	
	15. Week	Application of Time Series Methods in Macroeconomics and Finance	
Course Evaluation Criteria	In-Term Studies	Quantity	Percentage %
	Mid-terms		%
	Quizzes		%
	Assignments		%
	Attendance		%
	Practice		%
	Project	1	100 %
	Final examination		%
	Total		100%
Disability Policy	<p>If you have a documented disability (e.g., visual, hearing, or physical impairment, etc.) that may influence your performance in this course, it is recommended to meet with the Engelsiz AYBU (https://aybu.edu.tr/engelsiz/content_list-327-yildirim-beyazit-universitesi-engelsiz-universite-birimi-yonergesi.html) to arrange for reasonable conditions (such as accommodation, etc.) to ensure an equitable opportunity to meet all the requirements of this course. You may also contact the local authority of the Faculty of Humanities and Social Sciences. You should communicate your needs to the course instructor as soon as possible to ensure that any course needs concerning exams, lecture materials, etc. are met.</p>		