AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Introduction to Time Series Analysis								
Course Code	ZTE530		Couse Level	Second Cycle (Master's Degree)					
ECTS Credit	8	Workload	206 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	The objective of this course is to enable the students to learn obtaining time series models and to provide them with the skills for interpreting								
Course Content	Time series, trend, stationarity, autoregressive-moving average processes, Forecast with time series models, causality, VAR models								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Case Study, Problem Solving								
Name of Lecturer(s)	Prof. Osman Orkan ÖZER								

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	30
Final Examination	1	50
Assignment	1	20

Recommended or Required Reading	
1	Greene, William H. (2012): Econometric analysis. 7. ed., internat. ed. Boston, Mass.: Pearson (Pearson series in economics).
2	Tarı, Recep (2015): Ekonometri: Umuttepe Yayınları, 5. Baskı,ISBN:6055100254
3	KIRCHGÄSSNER, Gebhard; WOLTERS, Jürgen (2007). Introduction to modern time series analysis. Springer Science & Business Media, 2007.

Week	Weekly Detailed Course Contents	
1	Theoretical	The Historical Development of Time Series Analysis
2	Theoretical	Graphical Representations of Economic Time Series
3	Theoretical	Stationarity and lag operator
4	Theoretical	Autoregressive (AR) and Moving Average (MA) process
5	Theoretical	Mixed Processes ARMA(p,q) models estimation
6	Theoretical	Evaluation of Forecasts
7	Intermediate Exam	Midterm exam
8	Theoretical	The Box and Jenkins Method
9	Theoretical	Forecast with time series models
10	Theoretical	Unit Root tests (ADF, DF, PP).
11	Theoretical	Causality and Granger causality tests
12	Theoretical	VAR models
13	Theoretical	Variance Decomposition and Impact-Response Functions
14	Theoretical	Term Project Presentation
15	Final Exam	Final Exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	10	3	182
Assignment	1	2	2	4
Midterm Examination	1	8	1	9
Final Examination	1	10	1	11
			Total Workload (Hours)	206
			[Total Workload (Hours) / 25*] = **ECTS**	8
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	To be able to learn the basic principles of time series
2	To be able to gain the ability of analyses in time series models
3	To be able to gain the ability of economics future forecasting
4	Gaining the ability to introduce social events into mathematical patterns
5	To be able to examine causality among the events taking place in the economy

Programme Outcomes *(Agricultural Economics Master)*	
1	To be able to comprehend and solve agricultural economic issues using Agricultural sciences and the basic principles of economic science.
2	To be able to access information, evaluate, interpret, and implement in the processes of the scientific research processes related to Agricultural economy.
3	To be able to integrate the relationship between the use of natural resources and productivity, with environmental, food safety and sustainability objectives
4	To be able to predict the effects of economic and political developments on the Turkish agricultural sector, to be able to view, comprehend and interpret national and international agricultural markets, to be able to apply the innovative methods.
5	To be able to communicate with all actors showing activity in the countryside at the required level of behavior science, to detect problems, and to be able to conduct joint project.
6	To be able to lead multi-disciplinary studies in agricultural sciences, to be able to enhance solutions in complex situations and to be able to take responsibility.
7	To be able to raise awareness about the new and developing practices of the job, to be able to review and learn these when needed.
8	To be able to use theoretical and practical information in agricultural economics.
9	To be able to design innovative solutions integrating the original ideas and methods in agriculture and the economy with the system, part or process designs.
10	To be able to articulate the idea, and the findings about the research topic verbal and written in an effective way.

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P8	5	5	5	5	5
P9	5	5	5	5	5