Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
ECK 563	Time Series Analysis	2	3	0	0	3	8

Prerequisites	
Admission Requirements	

Language of Instruction	Turkish
Course Type	Elective
Course Level	Masters Degree
Objective	To create the concept of dynamic systems in graduate students. To show that dynamic systems have different modeling according to the situations encountered
Content	Adapting dynamical systems to social science problems and observations, teaching stochastic processes and especially autoregressive processes as required, and testing their dynamic properties. The use of these tests to investigate the validity of certain assumptions of economic theory and financial theory, to discuss the theorems and hypotheses that have lost their validity, and to provide the necessary infrastructure in the student in order to model in accordance with current developments.
References	J.D. Hamilton Time Series Analysis Hayashi Econometrics, Mishkin Money, Banking and Financial systems Banarjee et al. Co-integration Malkiel non-random walk Aumann agreeing to disagree Ozkaya, Karanfil estimation of unrecorded economy

Theory Topics

Week	Weekly Contents
1	Dynamic systems - Kalman
2	Kalman filter - supply and demand test
3	Fama - Malkiel EMH
4	Aumann Agreeing to disagree
5	Geonokoplos-Polermarchakis
6	EUT - von Neumann , J. Nash, SEUT - Savage, Gilboa
7	AR(p), MA(q) Hamilton 3. - 4. Chapter
8	ARIMA (p,d,q) Hamilton 17.Chapter
9	ADF, PP, KPSS Stochastic process
10	Ozkaya, Karanfil Estimation of unrecorded economy
11	CB volatility analysis and GARCH analysis
12	FOREX, appliction
13	Gold ounce, Oil prices uygulama
14	Lineer - olmayan stokastik süreç örneği