

Antalya Bilim University
School of Business and Social Sciences
Business Administration Department
Financial and Economic Time Series Course Syllabus, BUSI 422

Course Description & Objectives:

The purpose of this course is to provide an introduction to time series analysis and forecasting. Time series forecasting is an important problem that spans many fields including business and industry, government, economics, environmental sciences, medicine, social science, politics, and finance.

Its prerequisites are Statistics, Econometrics, and computer-based information systems is necessary as well.

Required Software: QM for windows, Excel QM and Excel Spreadsheets

Textbook:

- Taylor B. W., *Introduction to Management Science, 12th.ed.*, Pearson Education, 2016.

Reference:

- *Introduction to Time Series Analysis and Forecasting, 2nd Edition* Douglas C. Montgomery, Cheryl L. Jennings, and Murat Kulahci
- *Render Barry, Ralph M. Stair Jr., Michael E. Hanna and T. S. Hale, Quantitative Analysis for management, 12th ed.*, Pearson Education 2015

Developing Graduate Attributes

Students will be encouraged to develop the following graduate attributes by undertaking the course activities and mastering the course contents. These attributes will be assessed within the assessment tasks:

- skills involved in scholarly enquiry;
- an in-depth engagement with the relevant disciplinary knowledge;
- the capacity for analytical and critical thinking;
- the ability to engage in independent and reflective learning.

Academic Honesty

Any form of cheating or academic dishonesty is strictly forbidden in this class. If I find out that an exam turned into me is not the work of the sole person that has his/her name at the top of the page, I will issue a zero grade for the course, and the student may be subject to further disciplinary action.

Assessment Criteria:

Attendance & Participation (20%): Students are required to exhibit proper discipline, behavior, and responsibility. **Midterm (30%):** Students are responsible for all class material covered until the midterm exam.

Quiz (10%): 2 Quizzes each 5%

Final exam (40%): The exam is cumulative and will focus on all units and topics studied throughout the course, but more emphasis will be on the topics after the midterm.

Notes: The minimum passing score = 50%

70% attendance is required to enter the Final exam which is equal to min 9 weeks attendance.

Course outlines	
Week	Topic
1	Introduction to Time Series Analysis.
2	Forecasting Methods: Qualitative methods, Data mining

3	<i>Time Series Methods: Moving Average, Weighted Moving Average, using Excel</i>
4	<i>Exponential Smoothing, Adjusted Exponential Smoothing, using Excel</i>
5	<i>Linear trend line, Seasonal adjustments, using Excel</i>
6	<i>Forecast Accuracy</i>
7	<i>Time series Forecasting using Excel, QM for windows</i>
8	Midterm Exam
9	<i>Regression Methods, Linear regression</i>
10	<i>Multiple Regression</i>
11	<i>Multiple Regression</i>
12	<i>Case Study: Forecasting State University</i>
13	<i>Case Study: Forecasting Airport Passenger Arrivals</i>
14	<i>Case Study: Forecasting Lost Sales</i>
Usefull Websites	<ul style="list-style-type: none"> • The Companion Website, at www.pearsonglobaleditions.com/taylor • The Companion Website, at www.pearsonglobaleditions.com/render • http://qm-for-windows.software.informer.com/5.2/ <p>Free software download.</p>
Calculators:	<i>Students will need a photo ID on test days. Students may only use standard/basic, scientific, or graphing calculators. Cell phones and all other WiFi enabled devices are prohibited during exams. They are not allowed out of your bag during exams.</i>
Tech Usage:	<i>Laptops, tablets, phones, and other digital devices are distracting to you and also distract others sitting nearby. As a result, I ask that you choose to occupy a seat in the last two rows of class if you plan to use one of these devices during lecture. Please do not record our lectures, photos are forbidden too. Also, try to remember to keep phones on silent during class.</i>

Note: I reserve the right to make changes to the syllabus.

Note: a score below 50 → letter F