

Economics 309
Economic Forecasting
Summer 1 – 2015
ECO 309.01W (40004)

Instructor: Stephen Harris
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Office Hours: By appointment – contact me via email
Office: Online
Class Website: <https://leo.tamuc.edu/> Choose eCollege once you login to myLeo.
Class Dates: 6/8/2015 through 7/9/2015

Catalog Description:

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisites: Eco 231(ECO 2301), Eco 232 (ECO 2302); Math 176 and BA 302 (or GBUS 302).

Course Objectives

1. Be able to calculate and interpret basic sample statistics.
2. Be able to determine the components of a time series.
3. Distinguish between stationary, nonstationary, and random data.
4. Understand and distinguish between different types of smoothing.
5. Understand the concept of decomposition.
6. Be proficient in using at least one software package to forecast.
7. Understand and interpret simple and multiple regression analysis.
8. Be able to identify the violation to regression assumptions.
9. Understand and run ARIMA Model.
10. Be able to conduct residual diagnostics.

This course is part of the business core.

Textbook:

Business Forecasting, 9th ed., Hanke and Wichern.
Pearson Prentice Hall, 2009. ISBN-10: 0132301202 ISBN-13: 9780132301206 .
<http://www.pearsonhighered.com/hanke/> (Be sure you are looking at the 9th edition.)

Software:

You need to rent the student version of MINITAB 17. OnTheHub.com is an on-line distributor of Minitab software. As a student you can rent Minitab 17 on-line and download it straight to your personally owned computer. You will be required to provide a campus e-mail address (.edu) or other proof of your academic status.

OnTheHub.com offers two rental options. Currently they offer a six month rental of Minitab 17 for \$29.99. They also offer a 12 month rental of Minitab 17 for \$49.99. These licenses are for the full professional version. To rent go to www.onthehub.com/minitab (do not rent or use Minitab 16 for our classwork.) Note: There is also a 30-Day Trial available for free on this website.

Computers and Internet:

This is an online course. You will need access to the internet. You are expected to check your myLeo email and the class website often. My suggestion is daily. Each week will have videos for you to watch. ClassLivePro will also be available and used periodically as needed to assist with the material. This class will utilize Microsoft Excel, Microsoft Word, and/or Minitab for every homework and exam. Labs are available at the main campus and most of our off site campus locations. Visit the following link to learn more about each location. Check with each location for their hours and software availability.

<http://www.tamuc.edu/academics/locations/default.aspx>

Components of Grade:

Test 1	100
Test 2	100
Test 3	100
Test 4	100
Homework	100
<u>Project</u>	<u>100</u>
Total Points:	600

Grade Distribution:

A: 540-600 points
B: 480-539 points
C: 420-479 points
D: 360-419 points
F: 0-359 points

Tests

Test due dates are listed on the Tentative Course Plan below. An announcement will be posted once they are made available in eCollege.

Test 1 will cover Chapters 1-3

Test 2 will cover Chapters 4-5

Test 3 will cover Chapters 6-7

Test 4 will cover Chapters 8-9

Your tests will require you to use Excel, Minitab, and/or Word. A test that is missed will receive a grade of "0", unless your professor is notified prior to the test and the excuse is a legitimate medical one or officially approved. Regardless of the excuse, if you miss two tests you will automatically fail the class. It is the student's responsibility to make arrangements for tests that are missed and excused. Again, unexcused missing of a test or an assignment will result in the grade of "0".

Homework:

Homework due dates are posted on the Tentative Course Plan below. You will have one homework assignment for each week in this course. Each will be worth 25 points. There are 4 of these for a total of 100 points. The homework will be selected from even numbered problems from the chapters. Additionally, you are highly encouraged to work all of the odd numbered problems in each chapter. The answers to the odd numbered problems are posted in the back of the textbook and in eCollege under DocSharing. Homework will not be accepted after the due date. Answers to the homework assignments will be posted the day after they are due.

Project:

Details of the project will be posted in eCollege. Your completed project should be uploaded to the Dropbox by midnight on **July 6th**.

Tentative Course Plan:

Chapter	Topic	Week of
1	Introduction to Forecasting and Excel	June 8 to 14
2	A Review of Basic Statistical Concepts	
3	Exploring Data Patterns and Choosing a Forecasting Technique	
Homework – Due June 14 Test 1 – Due by June 17		
4	Moving Averages and Smoothing Methods	June 15-21
5	Time Series and Their Components	
Homework – Due June 21 Test 2 – Due by June 24		
6	Simple Linear Regression	June 22-28
7	Multiple Regression Analysis	
Homework – Due June 28 Test 3 – Due by July 1		
8	Regression with Time Series Data	June 29-July 5
9	The Box-Jenkins (ARIMA) Methodology	
Homework – Due July 5 Project – Due July 6 Test 4 – Due by July 8		

Important Dates:

6/8/2015 to 7/9/2015: Class in Session

See the Academic Calendar for more details.

<http://www.tamuc.edu/admissions/registrar/academicCalendar.aspx>

Important Notices:

- Please read the statement regarding Civility in the Classroom in the Student Guidebook. It is on page 38 of the [Student Guidebook](#).
- Students of The College of Business at Texas A&M University-Commerce will follow the highest level of ethical and professional behavior. Actionable conduct includes illegal activity, dishonest conduct, cheating, and plagiarism. Failure to abide by the principles of ethical and professional behavior will result in sanctions up to and including dismissal from the university.
- Plagiarism represents disregard for academic standards and is strictly against University policy. Plagiarized work will result in an “F” for the course and further administrative sanctions permitted under University policy. Guidelines for properly quoting someone else’s writings and the proper citing of sources can be found in the APA Publication Manual. If you do not understand the term “plagiarism”, or if you have difficulty summarizing or documenting sources, contact your professor for assistance.
- Students are expected to check the eCollege site regularly for updates in the form of announcements. You should also check your myLeo email daily.

Students with Disabilities:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
 Texas A&M University-Commerce
 Gee Library, Room 132
 Phone (903) 886-5150 or (903) 886-5835
 Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu

Student Evaluation Criteria

Criteria	1(Unsatisfactory)	2 (Emerging)	3 (Proficient)	4 (Exemplary)
Understanding of time series data and components using various statistical and graphical tools.	Student can't demonstrate understanding of the components.	Student can identify some components.	Student can identify most components using most of the tools.	Student can identify all components using all the tools.
Understanding of Regression Analysis and application to both time series and cross section data.	Student cannot demonstrate an understanding of regression analysis.	Student demonstrates an understanding of some regression concepts but cannot apply it.	Student demonstrates an understanding of the concept of regression and can apply those concepts.	Student demonstrates an understanding of the concept of regression and can apply to time series and cross section data.
Understanding and application of different univariate time series models including but not limited to Smoothing, Decomposition, and ARIMA.	Student cannot demonstrate an understanding of univariate methods.	Student demonstrates an understanding of some/ all of the univariate time series models but can't apply.	Student demonstrates an understanding of some/ all univariate time series models and apply some of them successfully.	Student demonstrates an understanding of all univariate time series models and apply them successfully.
Identification of the best model from alternative models and obtaining forecasts using at least one software.	Student cannot demonstrate an understanding of the model selection processes.	Student can demonstrate an understanding of 1 out of 3 of these processes.	Student can demonstrate an understanding of 2 out of 3 of these processes.	Student can demonstrate an understanding of the entire processes.