

EMBA 510 02W 22752

Economic Forecasting

Spring 2014

Professor: Stanley Holmes

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**Office Hours :** 11:00 A.M. to 3:00 P.M. Central Time Tuesdays and Thursdays or by appointment (BA Room 132D TAMU Commerce). We may also meet online at our Classlive website during the hour before class and by appointment.

**Text:** *Business Forecasting* 9<sup>th</sup> ed., Hanke and Wichern.

Pearson/Prentice Hall, Inc, ISBN: 139780132301206

**Software:** You need to rent the student version of MINITAB 16 for 6 months at:

<http://www.minitab.com/en-US/academic/licensing-options.aspx>

You also need Microsoft Excel on your computer.

**Hardware:** You must have a headset with microphone and a computer camera for this class. It is required to take the exam and participation during class. Be sure to test the equipment before class begins.

**Important Dates:** Please refer to the academic calendar at:

<http://www.tamu-commerce.edu/registrar/pdfs/academicCalendar09.pdf>

**Class:** Online live lectures will be on Tuesdays from 6:30 P.M. to 9:30 P.M. Central Time that will cover specific chapters and examples. Online lectures can be reviewed by replay. Log on to eCollege and select the Live icon on the toolbar to access the ClassLive lecture area.

## **COURSE OBJECTIVE**

Objectives of this course are to introduce the student to the basics of quantitative methods and their application to real business situations. In addition, the student is expected to have a working knowledge

of Excel and the use of other current software available for forecasting. A special focus of this course is the linkage of market plans to business forecasting. After taking this course the students will be able to apply different forecasting techniques to empirically estimate the effects of marketing and business policies and professionally present the results of their analysis.

## **COURSE OUTLINE**

Chapter 1 Introduction to Forecasting in the Enterprise - *Week of Mar. 31*

Chapter 2 Review of Basic Statistical Concepts - *Week of Mar. 31*

Chapter 3 Data Patterns and Forecasting Techniques - *Week of Apr. 7*

Chapter 4 Moving Averages and Smoothing Methods - *Week of Apr. 14*

Chapter 5 Time-Series and Their Components - *Week of Apr 28*

***Project Part 1- Data identification and collection of 3 important independent (X) variables (This is an Interdisciplinary Team assignment) -20 points***

- *Due by May. 2*

***Project Part 2 - Exponential Smoothing and Decomposition X Variable Forecasts – 20 points***

- *Due May. 2*

Chapter 9 Box-Jenkins (ARIMA) Type Forecasting

- *Week of May. 5*

***Project Part 3 - ARIMA Forecasts for each X variable and selection of the forecast to be used in regression (This is an interdisciplinary Team assignment) – 20 points - Due May 16***

Chapter 6 Simple Linear Regression - *Week of May 19*

Chapters 7& 8 Multiple Regression Analysis/Time Series - *Week of May 20*

***Project Part 4 Multiple Regression Forecast submission – 20 points*** - *Due May 30*

***Combining Forecasts using Regression*** - *Week of Mar.26*

***Exam on Regression (10) extra credit points)*** - *Due by June 5*

***Project Part 5 Completed Online Forecast Presentation and project submission (This is an Interdisciplinary Team Assignment) - 20 points*** - *Week of June 2*

NOTE: This outline is subject to change! Check your e-mail multiple times every day, check our class eCollege website and attend the class regularly.

## **GRADES AND ADMINISTRATIVE MATTERS:**

Grades will be based on a 5-part project including a completed formal project presentation worth 20 points for each part (total of 100 points.), a final exam (10 extra credit points added to your final grade). Project parts must be completed and submitted on time. No late work will be accepted. Plan in advance for the exam: there will be no early exams and no make-up exam Course grades will be assigned as:

90 – 100 % A

80 – 89 % B

70 – 79 % C

60 – 69 % D

Below 60 % F

See the student evaluation criteria below.

**HELPFUL HINTS** Since this is an online course, you need to follow your school emails regularly. You will have regular announcements and uploads posted in the class eCollege website. For each chapter assigned, you need to read your book, make sure you understand the key concepts and apply the concepts using Microsoft Excel and MINITAB. Reading the assigned materials, working the assigned exercises, using office hours, being in frequent communication with your instructor, and checking the class website regularly are very important learning tools. A textbook will be placed on 2 hour reserve in the library on campus in case the dog ate yours. It can be checked out from the circulation desk. Unfortunately, there is not a similar online opportunity.

All assignments must be submitted to the appropriate assignment dropbox in the course eCollege website. Each submission should have a filename with your **first initial** followed by your **last name, eco 510** and **assignment number (assign#)**.

**EXAM:** The exam will be online and can be found on our class eCollege website. The exam is closed book and subject to a time limit. This exam will be proctored online and you will use the camera and headset in the exam. You will have to upload your answers to exam problems by the specified deadline. Late work will not be accepted.

**PROJECT PARTS:** You will have to upload your project parts to the relevant dropbox folder on e-College by midnight of the specified due date. Each submission should include a summary paragraph of what you had done, how you have done it and interpretations of the results. Plots and output without interpretation will be considered incomplete and will not be graded. Submit the document in Word format with pasted Minitab results and inserted Excel data tables. Be sure to provide an exact webpage citation for each variable and clearly LABEL each variable in the Excel tables.

The last part of the class project is an executive level presentation of the company revenue forecast with the best regression model. Each company team will be responsible for presenting a market plan and forecast for the next two years. The forecast portion of presentation will be limited to 10 minutes followed by a few questions from the faculty review team. The presentation will be given in Adobe Connect and a website URL will be provided to along with a scheduled time for the company presentation.

**CLASS, LAB/ WORKSHIP AND OFFICE HOURS:** I strongly recommend using all options. Do not miss a class lecture session and if you have any questions contact me for further explanations via the email. If you need to miss a lecture be sure you view a replay.

## **RULES, REGULATIONS AND OTHER STUFF**

All students enrolled at the university shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The College of Business and Technology at Texas A&M University-Commerce students 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** 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.

STUDENT WORKLOAD University students are expected to dedicate a minimum of *90 clock hours* during the term/semester for a 3SH course.

**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](mailto:StudentDisabilityServices@tamuc.edu)

**Student Evaluation Criteria**

<b>Criteria</b>	<b>1(Unsatisfactory)</b>	<b>2 (Emerging)</b>	<b>3 (Proficient)</b>	<b>4 (Exemplary)</b>
Understanding of time series data and components using various statistical and graphical tools in Excel and Mintab.	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.
Deriving the best forecast of key enterprise data from the combination of various forecasts.	Student cannot demonstrate an understanding the processes to derive the best enterprise forecast.	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.