



# **Eco 309 01W #20745 Economic Forecasting**

## **Course Syllabus: Spring, 2018** **Jan. 16, 2018**

<b>Instructor:</b>	<b>Stanley Holmes, Ph.D.</b>
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<b>Office Hours:</b>	<b>BA 102D 11:00 A.M. to 3:00 P.M. CDT Monday and Wednesday. 10:00 A.M. to 12:00 P.M. Tuesday and Thursdays Or Online by appointment.</b>

### **Course Description**

The online sessions are from 7:00 P.M. to 9:15 P.M. Central Time every Tuesday. Additional work sessions may also be scheduled as needed.

This course is designed to investigate the techniques of the forecasting process as applied to business, finance and economics. Experience is gained in using four popular forecast methods, developing a causal variable hypothesis for forecasting, and in collecting and analyzing data. The resulting forecast will be used to develop a pro-forma strategic plan for the forecast period. Particular emphasis is given to communicating findings to senior managers in a concise written and verbal format.

### **Course Objectives**

1. Students will demonstrate the ability to develop an eight-quarter revenue forecast and a pro-forma strategic plan for their assigned company using Minitab and Excel software. This involves the evaluation of four popular alternative forecast methods and deriving the best forecast from among the methods.
2. Students will learn how to write concise summaries of each forecast model and results in a manner that senior managers will be able to understand.
3. Students will demonstrate the ability formulate causal hypotheses and to use and forecast appropriate secondary data to forecast business performance.
4. Students will write and submit a formal class project targeted to senior management that includes the results of each forecast model and a pro-forma strategic plan and all data and citations used in the analysis. An opportunity to conduct a verbal executive level presentation of forecast results will be done in an online Webinar.

## Course Materials

**Text:** *Business Forecasting 9<sup>th</sup> Edition, Hanke & Wichern,*

ISBN 978-0-132-30120-6 (No CDs are required)

Electronic versions are fine.

**Software:** Rent the student version of the Minitab18 software at Minitab website for 6 months at <http://www.minitab.com/education/semesterrental/default.aspx>).

Or you may rent a copy from OnTheHub.com an on-line distributor of Minitab software. As a student you can rent Minitab 18 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.

Make sure that you test the software before class begins. MAC users must follow the instructions in Doc Sharing Minitab for MAC users. In addition, I have included a link to the help topic on using Minitab on a Mac that has some of the programs that can be used <https://support.minitab.com/en-us/installation/frequently-asked-questions/other/minitab-companion-on-mac/>

You must also have a working copy of Microsoft Excel and Microsoft Word on your computer as well.

**Hardware:** You must have a headset with a microphone to participate in class. It is also recommended that you have a computer camera as well to facilitate class participation (see the other computer requirements below).

## GRADING

Grades will be based on a hypothesis test (10 points) 1 mid-term exam (30 points), company forecast and pro-forma strategic plan project (30 points) and a final (30 points) exam. These are shown in red in the Course Outline shown below. Plan well in advance for the exams: there will be no early exams and no make-up exams. An exam that is missed will be considered an F, unless I am notified prior to the exam and the excuse is a legitimate medical one or officially approved. Note that computer issues are not a valid reason for missing an exam. Regardless of the excuse, if you miss two tests or do not submit a class project you will automatically fail the class. Assignments will be announced in the class; it is your responsibility to keep up with the assignments. Late assignments will not be accepted. Course grades will be assigned as:

90 – 100 % A

80 – 89 % B

70 – 79 % C

60 – 69 % D

Below 59 % F

I have provided extra credit work during the course to serve as a checkpoint on your progress and enable me to provide input to your work. Extra credit assignments are designated as (EC) in the Course Outline below. Keep in mind that every assignment I request will be used in the final class project. I strongly suggest that you complete the extra credit assignments to ensure a good course grade.

### **You Will Assume the Role of a Business Forecaster and Planner**

1. Your assigned company and company data provide input to your primary role.
2. You are a senior business forecast analyst in that company.

3. You report directly to the VP of Strategic Planning.
4. Your primary responsibility is the development and presentation of a strategic revenue and income forecast (or pro-forma strategic plan) for your assigned company.
5. Your VP prefers to see all issues framed initially in terms of a hypothesis statement.
6. The VP does not expect lengthy, verbose, and repetitive documents or PPTs submitted.
7. The VP expects concise and supported analysis of the forecast models and results.
8. In particular, the VP is interested in the relationship between the revenue variable (objective variable Y) and the causal variables (X) you select.
9. The exec does expect you to recommend or select the best forecast multiple regression model and results in the Class Project Report.
10. Along with the assigned company quarterly revenue forecast you are also expected to develop a pro-forma strategic plan income statement for each forecast quarter.
11. You will present the forecast and strategic plan with your comments on the business implications of the plan.
12. You will follow the format outlined in the "Class Project" outline in DocSharing.
13. You may use any publically available data or information in your analysis including the macroeconomic data provided in DocSharing.
14. Your contribution to the company is to provide a strategic plan and clearly present the business implications of the plan.

## TECHNOLOGY REQUIREMENTS

- To fully participate in enhanced courses, you will need to use a current, Flash enabled browser. For PC users, the suggested browser is Internet Explorer 9.0 or 10. For Mac users, the most current update of Firefox or Chrome is suggested.
- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
  - 512 MB of RAM, 1 GB or more preferred
  - Broadband connection required courses are heavily video intensive
  - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution
- You must have a:
  - sound card, which is usually integrated into your desktop or laptop computer
  - speakers or headphones (headphones with mic are preferred).

- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. Java can be downloaded at: <http://www.java.com/en/download/manual.jsp>
- Current anti-virus software must be installed and kept up to date.
- You will need some additional free software for enhanced web browsing. Ensure that you download the free versions of the following software:
  - Adobe Reader
  - Adobe Flash Player
- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.
- For additional information about system requirements, please see: <https://secure.ecollege.com/tamuc/index.learn?action=technical>

## ACCESS AND NAVIGATION

### Access and Log in Information

This course will be facilitated using the learning management system used by Texas A&M University-Commerce. To get started with the course, go to: <http://www.tamuc.edu/myleo.aspx>.

**You will need your CWID and password to log in to the course. If you do not know your CWID or have forgotten your password, contact Technology Services at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).**

It is strongly recommended that you perform a "Browser Test" prior to the start of your course. Select on the 'myCourses' tab, and then select the "Browser Test" link under Support Services.

### Student Technical Support

Texas A&M University-Commerce provides students technical support and technical assistance is available 24 hours a day/ 7 days a week.

If at any time you experience technical problems (e.g., you can't log in to the course, you can't see certain material, etc.) please contact the Help Desk, available 24 hours a day, seven days a week.

The student help desk may be reached by the following means 24 hours a day, seven days a week by email [helpdesk@online.tamuc.org](mailto:helpdesk@online.tamuc.org) or call us at 903-468-6000 to initiate a support request

**Accessing Help from within Your Course:** Click on the '*Tech Support*' icon on the upper left side of the screen inside the course. You will then be able to get assistance via online chat, email or by phone by calling the Help Desk number noted below.

**Note:** Personal computer problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, an Internet cafe, or a bookstore, such as Barnes & Noble, etc.

## **Policy for Reporting Problems with the LMS**

Should students encounter YouSeeU based problems while submitting assignments/discussions/comments/exams, the following procedure **MUST** be followed?

1. Students must report the problem to the help desk. You may reach the helpdesk at [helpdesk@online.tamuc.org](mailto:helpdesk@online.tamuc.org)
2. Students **MUST** file their problem with the helpdesk and obtain a helpdesk ticket number
3. Once a helpdesk ticket number is in your possession, students should email me to advise me of the problem and to provide me with the helpdesk ticket number
4. At that time, I will call the helpdesk to confirm your problem and follow up with you

**PLEASE NOTE:** Your personal computer/access problems are not a legitimate excuse for filing a ticket with the Help Desk. You are strongly encouraged to check for compatibility of your browser **BEFORE** the course begins.

## Internet Access

An Internet connection is necessary to participate in discussions and assignments, access readings, transfer course work, and receive feedback from your professor. View the requirements as outlined in Technology Requirements above for more information.

## myLeo Support

Your myLeo email address is required to send and receive all student correspondence. Please email [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu) or call us at 903-468-6000 with any questions about setting up your myLeo email account. You may also access information at <https://leo.tamuc.edu>.

# COURSE OUTLINE/CALENDAR

Any special accommodation requests (not related to disabilities – see below for those issues) must be made to me in a memorandum with documentation attached. The outline below is subject to change. Make sure to attend class sessions and check email regularly to note any changes.

DATE Week of	READING
Jan 1	Course Outline and Statistics Review Chapters 1 and 2 Data Analysis
Jan 8	Hypothesis Testing and Application (Slides)
Jan 15	Chapter 3 Autocorrelation and Data Characteristics (Slides) Preliminary Hypothesis Due 1/20 (EC)
Jan 22	Residual Analysis and Error Measures (Slides)
Jan 29	Chapter 6 Linear Regression Model Building Tested Hypothesis Due 2/3
Feb 5	Chapters 5 Decomposition and Forecast Model Components

<b>Feb 12</b>	<b>Chapter 4 Exponential Smoothing and Model Evaluation</b> <b>Exponential Smoothing X Variable Forecast Due 2/17 (EC)</b>
<b>Feb 19</b>	<b>Forecasting Independent Variables</b> <b>Chapter 9 Box-Jenkins Decomposition X Variable Forecast Due 2/24 (EC)</b>
<b>Feb 26</b>	<b>Chapter 11 Estimation/Diagnostics</b> <b>Advanced Box-Jenkins (Slides) ARIMA X Variable Forecast Due 3/3 (EC)</b>
<b>Mar 5</b>	<b>Univariate Forecast Methods Review</b> <b>EXAM 1 Univariate Forecasting Methods and Time Series Data Analysis Due 3/11</b>
<b>Mar 12</b>	<b>Spring Break</b>
<b>Mar 19</b>	<b>Combining Approaches, Panel Data Regression, New Service Forecasting and X Variable Forecast selection.</b> <b>Best X Variable Forecast &amp; Method Selected and Rationale Due 3/24 (EC)</b>
<b>Mar 26</b>	<b>Chapter 7 Time Series Regression Reliability and Dummy Variables (Slides)</b>
<b>Apr 2</b>	<b>Chapter 8 Addressing Serial Correlation and Heteroscedasticity (Slides)</b> <b>Preliminary Regression Model Due 4/7 (EC)</b>
<b>Apr 9</b>	<b>Strategic Plan Building and Evaluation (Slides)</b>
<b>Apr 16</b>	<b>Strategic Forecast and Plan Reporting and Presentations (Slides)</b>



**Class Project Due 4/21**

**Apr 23**

**Class Presentations 4/24 (EC)**

**Apr 30**

**Class Presentations (cont.) 5/3**

**EXAM 2 Comprehensive Due 5/7**

## **FORMAL EXECUTIVE REPORT ASSIGNMENTS**

The following are the two specific formal assignments:

### **Proposed Forecast Methods and Independent Variables for the Project**

The hypothesis will include your data (both your dependent and at least 3 macroeconomic independent variables), data sources (the website source for each variable), data description, simple statistics and relevant plots on all variables, and the correlation matrix. Please read the project outline in Doc Sharing as soon as possible to get a good description of the requirements. This hypothesis will be due no later than midnight January 3. Remember, this is a formal description to company executives of your planned approach to forecast company revenue for eight quarters.

### **Class Project and Presentation – A Strategic Revenue Forecast For Your Assigned Company**

Complete revenue forecast and pro-forma strategic plan project for your assigned company will be due no later than midnight April 21. You need to upload the project in the eCollege class project Dropbox. The final project will include three PowerPoint executive level presentation slides and a formal report in MS Word supporting the assigned company revenue forecast and analysis. See the Project Outline in Doc Sharing for the content requirements for the formal report.

In addition, you must present your strategic forecast model, analysis and eight quarter forecast and strategic plan to the class. For this executive level presentation you must prepare no more than 5 power point slides for the 10 minute presentation. You must schedule your presentation with the instructor.

# COURSE AND UNIVERSITY PROCEDURES/POLICIES

## Student Considerations and Rules

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.

Students are required to use [leo.tamuc.edu](mailto:leo.tamuc.edu) email address for email communication.

The deadline for dropping a class is listed under the academic schedule.

Refer to Student's Guide Book located at:  
[www.tamuc.edu/studentlife/guidebook.html](http://www.tamuc.edu/studentlife/guidebook.html)

**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.

**NONDISCRIMINATION** A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

# University Specific Procedures

## ADA Statement

### 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 Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See *Code of Student Conduct from Student Guide Handbook*). Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: <http://www.albion.com/netiquette/corerules.html>

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

One grade will be deducted each day for papers turned in late. Anyone caught plagiarizing will receive an "F" in the course.  
All papers will be submitted to "Turnitin".

## **Academic Integrity**

Academic integrity is the pursuit of scholarly activity free from fraud and deception and is an educational objective of this institution. Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabricating of information or citation, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students.

## **Campus Concealed Carry**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to:

(<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>)

and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.