# Eco and Fin 533 01W #50350 and #50208
# Applied Financial & Economic Forecasting
# Course Syllabus - Summer II, 2017


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**Office Hours**: Online on hour before scheduled class time by appointment

## Course Description

This course meets every Monday and Wednesday evening from 6:30 P.M. Central Time until 8:30 P.M. Regular attendance is preferred and class participation will be noted. Log on the eCollege Course Home for live lectures that will cover specific chapters and examples. Online lectures can be reviewed by replay.
Since this is web based 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 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

## Course Materials

**Text:** Forecasting, Times Series, and Regression Bowerman, O'Connell and Koehler 4th edition 2005, Brooks/Cole With CD
ISBN : 13:978-0-534-40977-7

**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. Do not rent the Minitab Express version.

To rent go to www.onthehub.com/minitab (note do not rent or use Minitab 16 for our classwork.)

You will also need working copies of Microsoft Excel and Word on your computer as well. All assignments must be submitted as Word documents.

**Hardware:** You will need a working headset with a microphone or speaker and a microphone to participate in this class. When you sign in to the ClassLive session go to the toolbar and select Audio and then select Audio Set-Up Wizard to test your equipment.

## COURSE OUTLINE

**Week 1**

Chapter 1 Introduction to Forecasting
Chapter 2 Basic Statistical Concepts
Chapter 3 Simple Linear Regression
Chapter 7 Univariate Methods - Decomposition Methods
Chapter 8 Univariate Methods - Exponential Smoothing

- ✓ **Submit Proposed Independent Variables with Analysis (EC) Due - July 16**

**Week 2**

Chapter 9 Nonseasonal Box-Jenkins Models
Chapter 10 Estimation, Diagnostic Checking and Forecasting
Chapter 11 Box-Jenkins Seasonal Modeling
Chapter 12 Advanced Box-Jenkins Modeling

- ✓ ***ARIMA Forecasts for each X Variable*** **Due – July 23**
- ✓ ***1st EXAM—Chapters 9-12 - Due August 1*** **Due – July 24**

**Week 3**

Chapter 4 Multiple Linear Regression
Chapter 5 Model Building and Residual Analysis
Chapter 6 Time Series Regression

- ✓ **Preliminary Multiple Regression Model (EC) Due – July 30**

**Week 4**

Building a Pro-Forma Strategic Plan
Creating an Executive Level Project and Presentation

- ✓ ***Company Forecast and Pro-Form Plan Project*** **- Due August 4**

**Week 5**

- ✓ ***Presentation of the Forecast and Plan*** **(EC) - Due August 7**
- ✓ ***Final EXAM*** **comprehensive - Due August 9**

**NOTE: This outline is subject to change! Regular ClassLive attendance is needed to follow up with these changes and the assignments.**

# GRADING

Grades will be based on 2 exams (for a maximum of 30 points each) and a completed formal Company Forecast and Pro-Form Plan Class Project (for a maximum of 30 points). In addition, an ARIMA forecast for each hypothesized and analyzed X variable must be submitted (for a maximum of 10 points).

There are three extra credit assignments for: 1) Proposed Independent Variables and Analysis, 2) Preliminary Multiple Regression Model and Company Forecast, 3) Class Presentation of the Company Forecast and Plan. Each extra credit assignment is worth a

maximum of 5 points each. Project and assignments report must be completed and submitted on time. No late work will be accepted.

Plan in advance for the exams since there will be no early exams and no make-up exams. The exams will be open for three days and close on the due date. 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. Regardless of the excuse, if you miss one test or do not submit a class project you will likely fail the class. Again, late assignments and projects will not be accepted.
Course grades will be assigned as:
90 – 100 % A
80 – 89 % B
70 – 79 % C
60 – 69 % D
Below 60 % F

**PROPOSED INDEPENDENT VARIABLES FOR THE PROJECT**

The proposed variables will include your data for your dependent variable (Company Revenue) and at least 2 evaluated independent variables. Include the independent (X variable) website source for each variable, data characteristic description, basic statistics and relevant time series and scatter plots for each X variable along with a correlation matrix. You must also include a multiple regression evaluation for all selected X variables. The procedure for X variable evaluation will be discussed in class. You will need to upload the proposed independent variable evaluation in the appropriate assignment dropbox by midnight of the due date for credit.

Review the Project Slides in Doc Sharing as soon as possible to get an overview of the final Company Forecast and Plan Class Project. You need to upload the project in the eCollege class project Dropbox where it will be subject to turn-it-in. The Class Project is a formal executive level report in MS Word supporting the assigned company revenue forecast and analysis. Again, see the Project Slides in Doc Sharing for the content requirements for the formal report. In addition to the final project you will produce three PowerPoint executive level presentation slides relative to the forecast and plan and give the presentation to the class on the last class meeting day in Week 5.

**HELPFUL HINTS**

Objectives of this course is to enable the student to apply both regression and time series techniques and their application to real business situations as well as the use of current software available for forecasting.

# TECHNOLOGY REQUIREMENTS

- To fully participate in online 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 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.

- You also need a:
  - webcam
  - microphone

  For ClassLive Pro, headphones are suggested for use with recording and playback. We recommend a webcam with an integrated microphone, such as the Microsoft LifeCam Cinema. All devices should be installed and configured before class begins.

- 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

## Pearson LearningStudio (eCollege) Access and Log in Information

This course will be facilitated using Pearson LearningStudio, 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.**
It is strongly recommended that you perform a "Browser Test" prior to the start of your course. To launch a browser test, login to Pearson LearningStudio, click on the 'myCourses' tab, and then select the "Browser Test" link under Support Services.

## Pearson LearningStudio Student Technical Support

Texas A&M University-Commerce provides students technical support in the use of Pearson LearningStudio.
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 Pearson LearningStudio 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.

- **Chat Support:** Click on *'Live Support'* on the tool bar within your course to chat with a Pearson LearningStudio Representative.

- **Phone:** 1-866-656-5511 (Toll Free) to speak with Pearson LearningStudio Technical Support Representative.

- **Email:** helpdesk@online.tamuc.org to initiate a support request with Pearson LearningStudio Technical Support Representative.

**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 Pearson LearningStudio

Should students encounter Pearson LearningStudio 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 or 1-866-656-5511
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
5.

**PLEASE NOTE:** Your personal computer/access problems are not a legitimate excuse for filing a ticket with the Pearson LearningStudio Help Desk. You are strongly encouraged to check for compatibility of your browser **BEFORE** the course begins and to take the Pearson LearningStudio tutorial offered for students who may require some extra assistance in navigating the Pearson LearningStudio platform. **ONLY** Pearson LearningStudio based problems are legitimate.

**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 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.
**Learner Support**
Go to the following link One Stop Shop- created to serve you by attempting to provide as many resources as possible in one location.
Go to the following link Academic Success Center- focused on providing academic resources to help you achieve academic success.

# 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

### 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.
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.

| Learning Statement for FIN 533 | | | | |
|---|---|---|---|---|
| | **Unsatisfactory** | **Emerging** | **Proficient** | **Exemplary** |
| Understanding of time series data and components using various statistical and graphical tools in Excel and Minitab with applications to financial and economic data. | Student exhibits no understanding of the issues being examined. | Student makes serious errors with regard to the significant issues of the question or problem being examined, but at least demonstrates knowledge of some of the major points of the issues. | Student demonstrates understanding of the major points of the issues being examined but does not demonstrate understanding of all the details of the issue. | Student can demonstrate a thorough knowledge of the issue being examined. |
| Understanding of Regression Analysis and application to both applications to financial and economic data. | Student exhibits no understanding of the issues being examined. | Student makes serious errors with regard to the significant issues of the question or problem being examined, but at least demonstrates knowledge of some of the major points of the issues. | Student demonstrates understanding of the major points of the issues being examined but does not demonstrate understanding of all the details of the issue. | Student can demonstrate a thorough knowledge of the issue being examined. |
| Understanding and application of different univariate time series models including but not limited to Exponential Smoothing, Decomposition, and ARIMA using financial and economic data. | Student exhibits no understanding of the issues being examined. | Student makes serious errors with regard to the significant issues of the question or problem being examined, but at least demonstrates knowledge of some of the major points of the issues. | Student demonstrates understanding of the major points of the issues being examined but does not demonstrate understanding of all the details of the issue. | Student can demonstrate a thorough knowledge of the issue being examined. |
| Identification of the best model from alternative models and presenting the forecast in a formal report and executive level PowerPoint presentation. | Student exhibits no understanding of the issues being examined. | Student makes serious errors with regard to the significant issues of the question or problem being examined, but at least demonstrates knowledge of some of the major points of the issues. | Student demonstrates understanding of the major points of the issues being examined but does not demonstrate understanding of all the details of the issue. | Student can demonstrate a thorough knowledge of the issue being examined. |

FIN 533 is a required class for MS in Finance and an elective for MBA