

# College of Business Eco 309-01W: Economic Forecasting [CRN 50003] Syllabus (Summer II 2022): 7/11/2022- 8/11/2022

Professor: Dr. Kishor Guru-Gharana

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Preferred Form of Communication: email (24/7 during semester)

Communication Response Time: within 24 hours Class Hours: Online and Occasional Zoom Classes

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#### **Note about Counseling Center**

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

### **Course Description**

This course is designed to investigate the techniques of the forecasting process as applied to business, finance, and economics. Experience is gained in using various popular forecast methods, developing a causal variable hypothesis for forecasting, and in collecting and analyzing data.

## **Course Objectives**

- 1.Students will demonstrate the ability to develop models for forecasting using Excel and other programs like Minitab. This involves the evaluation of four popular alternative forecast methods and deriving the best forecast from among the methods.
- 2. Students will demonstrate the ability formulate causal hypotheses and to use and forecast appropriate secondary data to forecast business performance.
- 3. Students will be able to compare different forecasting models based on the data pattern.
- 4. Students will be able to interpret results generated by a computer software.

## **Course Requirements**

Software Required: Excel with Analysis Tool Pack (installation of Analysis Tool Pack is free).

**Prerequisites:** (Lvl U ECO 231 Min Grade C or Lvl U ECO 2301 Min Grade C) and (Lvl U ECO 232 Min Grade C or Lvl U ECO 2302 Min Grade C) and (Lvl U BA 302 Min Grade C or Lvl U GBUS 302 Min Grade C or Lvl U ECO 302 Min Grade C)

Textbook not required: You can use any available textbook on economic forecasting, but this course is totally based on the text and video lectures uploaded by the Professor.

#### Minimal Technical skills Needed

High school algebra; using Excel spreadsheet, Excel functions and Excel graphics; using PowerPoint and Data Analysis ToolPak.

**Instructional Methods:** The professor/instructor will upload lectures/notes on different forecasting models in D2L. Occasional Zoom classes will be held on agreed dates/times depending on topics. Moreover, the Professor may email power point slides or Word/Excel files with solved examples and explanations or post them in D2L. Questions can be asked in Zoom classes, and through emails. The videos of Zoom classes will also be uploaded in D2L.

## Student Responsibilities/Tips for Success in the Course

- 1. Summer classes are like crash courses where one week is like 3.75 weeks because we must cover 15 weeks' course in four weeks only. Therefore, you should be ready to devote about 7-8 hours a day on average for the whole month to excel in this class.
- 2. Students are expected to:
- a. Read text assignments as scheduled.
- b. Read the Instructions/Lecture/notes provided by the Professor.
- c. Work the assigned homework problems independently. Submit the homework problems by due date as indicated in Assignment uploaded in D2L or as instructed in class or through email.
- d. Pay attention to the regular announcements in class, through D2L and emails
- 3. This syllabus is tentative for the semester. It is meant to be a guide. Certain topics may be stressed more or less than indicated in the textbook and, depending on class progress, and certain topics may be omitted.
- 4. Homework problems are assigned and graded every week. Solution to Assignment problems will be provided after the deadline for submission.
- 5. Detailed Instructions with examples for each model will be provided in Zoom classes and D2L.
- 6. Feel free to ask questions through email or other online tools. I am accessible 24/7 through these channels even during weekends or holidays.
- 7. Demeanor: "All students enrolled at the university shall follow tenets of common decency and acceptable behavior conducive to a positive learning environment". See Students Guide Book.
- 8. Attendance Policy: Class attendance is not mandatory. However, regular class attendance (including Zoom classes) is highly correlated with students' performance in this class.

9. All Assignments and Tests are all done online through D2L.

## **Grading**

Grade Component Points

Four Assignments/Projects (4\*100) 400

Final grade in the course is the average from the student's average score in the four assignments/projects.

Average Range	Grade
90%-100%	A
80%-89%	В
70%-79%	C
60%-69%	D
Below 60%	F

## myLeo Support

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

## **Learner Support**

The <u>One Stop Shop</u> was created to serve you by providing as many resources as possible in one location. <a href="http://www.tamuc.edu/admissions/onestopshop/">http://www.tamuc.edu/admissions/onestopshop/</a>

The <u>Academic Success Center</u> provides academic resources to help you achieve academic success. <a href="http://www.tamuc.edu/campusLife/campusServices/academicSuccessCenter/">http://www.tamuc.edu/campusLife/campusServices/academicSuccessCenter/</a>

#### COMMUNICATION AND SUPPORT

**Interaction with Instructor Statement:** I generally respond to email questions within 24 hours. You can email any time (24/7) throughout the semester.

#### COURSE AND UNIVERSITY PROCEDURES/POLICIES

#### **Course Specific Procedures/Policies**

Missed examination: Missing Homework Assignment will result in zero score while missing the Final will result in grade "F". There will be no make-up Exam or make-up Assignment.

#### **Syllabus Change Policy**

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

# **University Specific Procedures**

#### **Student Conduct**

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the <a href="Student Guidebook">Student Guidebook</a>.

 $\frac{http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.as}{px}$ 

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: <a href="Netiquette">Netiquette</a> <a href="http://www.albion.com/netiquette/corerules.html">http://www.albion.com/netiquette/corerules.html</a>

#### **TAMUC Attendance**

For more information about the attendance policy please visit the <u>Attendance</u> webpage and Procedure 13.99.99.R0.01.

http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx

 $\frac{http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf$ 

#### **Academic Integrity**

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures: <a href="Undergraduate Academic Dishonesty"><u>Undergraduate Academic Dishonesty</u></a> <a href="13.99.99.R0.03">13.99.99.R0.03</a>

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Graduate Student Academic Dishonesty 13.99.99.R0.10

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#### **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 162
Phone (903) 886-5150 or (903) 886-5835 Fax (903) 468-8148

Email: <a href="mailto:studentdisabilityservices@tamuc.edu">studentdisabilityservices@tamuc.edu</a>

Website: Office of Student Disability Resources and Services

http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/

#### **Nondiscrimination Notice**

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.

#### **Campus Concealed Carry Statement**

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 the <a href="Carrying Concealed Handguns On Campus">Campus</a> document and/or consult your event organizer. Web url:

 $\frac{http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34Safet}{yOfEmployeesAndStudents/34.06.02.R1.pdf}$ 

## COURSE OUTLINE / CALENDAR

Topic	Mode	Date/Due date (Class starts on 1/12/2022)	Chapter Goals
Introduction to Forecasting	Zoom Lectures + Handouts + PPT slides + email attachments + D2L uploading	July 11- 17	Importance and overview of Forecasting and Forecasting Methods
Exploring Data Patterns and Introduction to forecasting techniques	Zoom Lectures + Handouts + PPT slides + email attachments + D2L uploading	July 11- 17	Data types and patterns; different forecasting techniques; Different Measures of Forecast error
Moving Averages and Smoothing Methods	Zoom Lectures + Handouts + PPT slides + email attachments + D2L uploading	July 11- 17	Naïve models; Averaging method; Simple, Moving and Double Moving Averages;
Assignment 1  Moving Average and Double Moving Average	Assignment uploaded in D2L	By 11.59 pm (midnight) on Tuesday, July 19, 2022	
Exponential smoothing Methods	Zoom Lectures + Handouts + PPT slides + email attachments	July 18-25	Exponential Smoothing Methods for trend and seasonal variation including Holt's two-parameters' method and Holt-Winters' three parameter methods (Seasonal)- triple smoothing.
Assignment 2  Exponential Smoothing-Holt- Winters two and three parameters)	Assignment uploaded in D2L	By 11.59 pm (midnight) on Tuesday July 26, 2022	

Time Series and their Components	Zoom Lectures + Handouts + PPT slides + email attachments	July 25- Aug 1	Decomposition: Trend; Additional Trend Curves; Forecasting Trend; Seasonality; Seasonally Adjusted Data; Cyclical and Irregular Variations
Assignment 3 Ratio-to-Moving Average Decomposition Model	Assignment Uploaded in D2L	By 11.59 pm (midnight) on Tuesday, Aug 2, 2022	
Simple Linear Regression	Zoom Lectures + Handouts + PPT slides + email attachments	Aug 1-11, 2022	Regression Line; Standard Error of the Estimate; Forecasting Y; Decomposition of Variance; Coefficient of Determination; Hypothesis Testing; Analysis of Residuals
Multiple regression with Time Series	Zoom Lectures + Handouts + PPT slides + email attachments	Aug 1-11,2022	Several Predictor Variables, Correlation Matrix, Multiple regression Model, Time Series Data and Autocorrelation; Autoregressive models; Heteroscedasticity; Regression with Seasonal data; Cointegrated Time series
Assignment 4  Multiple Regression Problem	Assignment Uploaded in D2L	By 11.59 pm (midnight) on Tuesday Aug 9 2022	