EAST TENNESSEE STATE UNIVERSITY

College of Business and Technology

Department of Economics and Finance

QUANTITATIVE METHODS FOR BUSINESS II
ECON 2080

Prerequisite: Math 1530 – Probability and Statistics

Required Text: Purchase options for ECON 2080:
Online purchase from Pearson Higher Education
Recommended - Business Statistics – A First Course Student Value Edition plus MyLab Statistics and PhStat with Pearson e-text – Access card Package, e-text 7th Edition with access to MYSTATLAB David M. Levine, Kathryn A. Szabat, and David Stephan 7th Edition, (Boston, MA: Pearson, 2016) from Pearson Higher Education on-line ISBN-13: 9780134190730
Google Pearson Higher Education Business Statistics. Then Introduction to Business Statistics – One Semester and Look for the Levine text**.**
OR
New MyLab Statistics – Instant Access for Business Statistics: A First Course, 7th Edition, Levine, Szabat & Stephan - online purchase from Pearson Higher Education, Look for the Levine text. ISBN-13: 9780321998309 – Th**is includes MY Stat Lab only – No e-text.**
PLUS
Business Statistics – A First Course Student e-text only. David M. Levine, Kathryn A. Szabat, and David Stephan 7th Edition, (Boston, MA: Pearson, 2016) from Pearson Higher Education online ISBN-13: 97803241998217.
OR
Purchase a 7th Edition of the text or an e-text on-line or from a student.

Any of these options **must include** the MyLab Statistics program which is required for the online homework. **You may delay payment for access to MyLab Statistics for only14 days before being dropped from the course.** If you have taken this course previously during the past 12 months and purchased the MyLab Statistics software, YOU DO NOT HAVE TO PAY AGAIN. Call (800) 677-6337 for the Pearson Help line to get re-registered.

NOTICE!

This course will use ETSU'S D2L system as well as the MYSTATLAB software. Therefore, if you are enrolled in this class, you should have access to our D2L course site. From this site, you will obtain important class information, weekly assignments, Instructor Notes and other materials. Because this is an online course, we do not meet in a traditional classroom with traditional hours, so it is designed to enable the student to manage their own time to complete the assignments and participate in this course.

Because this course is an online course and because the student has chosen to enroll in it, the student bears responsibility for ensuring that s/he has a reliable internet connection, appropriate

software and dependable hardware. Please note that assignments must be completed using either a desktop or laptop computer. Do not attempt to complete assignments on mobile phones or tablets. A persistent problem with Wi-Fi, connectivity, software, or hardware will not be considered by the instructor as a valid excuse for nullifying or changing deadlines, accepting late assignments, or opening closed assignments.

As noted, you must register for the MyLabStatistics. It is best to use Mozilla Firefox or Google Chrome in accessing MyLabStatistics. Go to the Course Home Page News and click on the BLUE PEARSON MYLAB icon. You will need to register the first time you go into the software. The D2L site under the Content tab has directions on how to register. Upon completion of this registration process you will be able to complete the on-line homework that is required for the course. **YOU SHOULD REGISTER FOR MY MATH LAB BY FRIDAY, JANUARY 29, 2021 AT THE LATEST**. The Pearson course login information is listed at the top of page 1 of this syllabus.

An old edition of the text without MYSTATLAB access will not be useful to you because the standalone access code will cost between $104.95 and $121.25 depending on where you buy it.

You will be able to use either PhStat2 or Data Analysis add-in to EXCEL to work your online homework and take-home exam problems. The installation instructions for both Data Analysis and PhStat2 are provided on the Pearson site at:
https://support.pearson.com/getsupport/s/article/PHStat-Upgrade-to-the-Latest-Version.

Additional student support including EXCEL DATA FILES, PHSTAT and directions on using EXCEL are provided through the Pearson Higher education website.

COURSE OBJECTIVES:

This course complements MATH 1530 – Probability and Statistics by enabling students to successfully employ inferential statistics in making better business decisions. As a technology-intensive course, spreadsheet software is utilized in performing the needed calculations for conducting the several tests. Emphasis is placed on interpreting the meaning of statistical test results for business policy.

Upon successful completion of this course, using spreadsheet technology, students should be able to:

- □ use confidence intervals to estimate parameters involving one sample with numerical or categorical data
- □ employ the traditional hypothesis testing procedure to examine single and multiple samples using numerical and categorical data
- □ employ correlation and regression procedures to establish a relationship between variables and to predict the value of a dependent variable
- □ translate real-life business problems to appropriate statistical formats for analysis and problem solving.

Treat this like any other course, you should be spending 8 – 10 hours a week working on class assignments and activities, reading, watching assigned videos, etc. It is crucial that you visit the course website every day in order to stay on top of important due dates and other class information.

There will be weekly **OPTIOMAL D2L CHAT SESSIONS**. These sessions offer the students an opportunity to interact with the course instructor to receive information on assigned problems and course materials. Dates and times for the chat sessions are found on the course syllabus.

Experience has shown that students who fail to log in on a regular basis or make a habit of putting off assignments until the last minute tend to score lower in the course. Get in the habit of checking D2L and your ETSU email account daily to keep up with the course. In order to do well in any course, students must participate in all aspects of the class and complete all assignments in a timely manner.

Lastly, get into the habit of emailing the instructor. As we are not in the typical classroom setting, interactions are extremely limited. If you have questions about any assignment, do not hesitate to contact the instructor. If you are spending hours on a problem and cannot come up with a solution, if you aren't sure that you have grasped a concept, if you simply want to clarify a particular point, email or call me. Don't allow yourself to become frustrated!

Course Materials:

Each week one or two **SETS OF INSTRUCTOR NOTES** will be posted in D2L. These notes are required reading. Included in these INotes will be links to YouTube videos that you should view. These videos help explain the subject matter in the chapters being covered during that week.

EXAMS: Grades for this course will be based upon the grades earned on the assigned homework problems and three examinations. The examinations will be posted in D2L in the Content area. An exam will be posted on the date listed on the syllabus. A dropbox for each exam has been create in D2L. To find the appropriate dropbox, go to the menu bar at the top of the opening page of D2L and click on "A to Z". Select Dropbox from the dropdown menu and submit your exam to the appropriate dropbox when it is due. The exam answer sheets may be scanned and returned to the appropriate dropbox, or submitted using WORD format. Become familiar with the INSERT SYMBOL feature of Word as you will have to insert the appropriate notation for hypotheses.

Communication with the Instructor

Since this is an online class it is important for the student to understand that there is less "in person" student /teacher interaction but they should not hesitate to contact the instructor for any reason. Email will always be the best way to communicate. If the student sends an email late at night, expect a response by the next afternoon. Emails mailed over the weekend should receive a reply in 48 hours. In the event that you need to call the instructor, call weekdays, between the hours of 9:00 AM – 4:00 PM.

Class Participation and On Line Etiquette:

In any course, be it online or in class, it is essential to learn how to build good critical thinking and communication skills. Statistics is not just about learning and memorizing facts. Interactive discussions among your class colleagues and the instructor are essential if you are to fully grasping the material. Therefore, students are encouraged to participate in on-line discussion groups. However, remember that there is a human being on the other end of your communication. Treat that human being with respect. Do not transmit any messages that you would be unwilling to communicate face to face.

Make-up and Late policy

Homework assignments **mus**t be completed by the specified due dates. Simply forgetting an assignment was due does not count as a legitimate excuse. In the event of technical problems the student should

notify the instructor immediately. Do not wait several days to let the instructor know you are having technical problems.

Academic Misconduct: Plagiarism, cheating, and other forms of dishonesty will not be tolerated.

All students must act responsibly with respect to their personal behavior and their interactions with others. Students are required to adhere to standards of conduct set forth in the student handbook. In any instance of student failure to adhere to the established standards of conduct, the instructor shall act in compliance with the procedures regarding academic dishonesty. Should instances of cheating, plagiarism or inappropriate sharing of materials or ideas occur, the dishonest student will be given a failing grade for that assignment or exam, and risks the distinct possibility of failure in this course.

Requests for Accommodations:

Any Student with a documented disability may request accommodations. Please contact the Center for Students with Disabilities and present a Faculty Accommodation form to the instructor as soon as possible. Accommodations include, but are not limited to, the following: extended time on tests, alternative test location or format, interpreter services and note taking services. When possible, student should request accommodations before the beginning of each semester. Testing accommodations must be arranged before the scheduled test date. No accommodations will be provided without approval from the Center for Students with Disabilities.

On-Line homework assignments are required through MYSTATLAB. There are 10 assignments during the semester. Assignments are due on the dates noted in the syllabus. Each homework assignment is worth 10 points maximum for a total of 100 points (25% of the course grade). You will be given unlimited time and attempts on the MYSTATLAB homework prior to their due date. It is possible to achieve 100% on all these assignments.

COURSE GRADING: Three exams and the weekly assignments will be the basis for your course grade. Each exam worth 25 percent of your final grade for a total for the 3 exams of 75%. It is crucial that you take these exams seriously as they will test your understanding of the topics we are covering during the week. These exams should not be missed. If an emergency arises, it is the student's responsibility to notify me before the exam in order to be eligible for a make-up opportunity. Failure to clear the excuse before the exam may result in a zero being assigned for the exam.

Course grades will be assigned based upon total points earned during the semester as shown below:

Points Earned		Percentage		Grade
368	400	92.0%	100.0%	A
360	363.6	90.0%	90.9%	A-
352	355.6	88.0%	88.9%	B+
328	351.6	82.0%	87.9%	B+
320	327.6	80.0%	81.9%	B-
312	319.6	78.0%	79.9%	C+
288	311.6	72.0%	77.9%	C+
280	287.6	70.0%	71.9%	C-
272	279.6	68.0%	69.9%	D
	< 272		< 60%	F

OFFICIAL SYLLABUS WILL BE PROVIDED IN THE COURSE

TENTATIVE COURSE OUTLINE:		
DATE:	**Topic**	**Assignment**
January 19, 2021	The Normal Distribution – Sampling distributions	Chapter 7
January 21, 2021	The Normal Distribution – Sampling distributions	Chapter 7
January 26, 2021	Confidence Interval Estimation of the Mean (Sigma known)	Chapter 8
January 28, 2021	Confidence Interval Estimation of the Mean (Sigma unknown)	Chapter 8
February 2, 2021	Confidence Interval Estimation of the Proportion	Chapter 8
	ON-LINE D2L CHAT SESSION 10:00 - 11:00 AM	
	MYSTATA LAB HOMEWORK ASSIGNMENT 1 DUE NLT 10:00 PM	
February 4, 2021	Sample Size Determination	Chapter 8
February 9, 2021	Hypothesis Testing Methodology	Chapter 9.1
	ON-LINE D2L CHAT SESSION 10:00 - 11:00 AM	
February 11, 2021	Hypothesis Testing Methodology	Chapter 9.1
February 16, 2021	t Test of Hypothesis for the Mean & p -Values	Chapter 9.2
	ON-LINE D2L CHAT SESSION 10:00 - 11:00 AM	
	MYSTATA LAB HOMEWORK ASSIGNMENT 2 DUE NLT 10:00 PM	
February 18, 2021	Hypothesis Testing for the Proportion	Chapter 9.3-4
February 23, 2021	ON-LINE D2L CHAT SESSION 10:00 - 11:00 AM	
	MYSTATA LAB HOMEWORK ASSIGNMENT 3 DUE NLT 10:00 PM	
February 25, 2021	Exam I	
March 2, 2021	Two Sample Tests	Chapter 10.1
	ON-LINE D2L CHAT SESSION 10:00 - 11:00 AM	
	MYSTATA LAB HOMEWORK ASSIGNMENT 4 DUE NLT 10:00 PM	
March 4, 2021	Pooled Variance t test for Differences in Two Means F Test for Differences in Two Variances	Chapter 10.1 Chapter 10.4
March 9, 2021	t test for Differences in Two Means from Related Populations	Chapter 10.2
	ON-LINE D2L CHAT SESSION 10:00 - 11:00 AM	
	MYSTATA LAB HOMEWORK ASSIGNMENT 5 DUE NLT 10:00 PM	
March 11, 2021	Z Test for Proportions	Chapter 10.3
March 16, 2021	Chi-Square Tests for the Differences in Proportions	Chapter 11
	ON-LINE D2L CHAT SESSION 10:00 - 11:00 AM	
	MYSTATA LAB HOMEWORK ASSIGNMENT 6 DUE NLT 10:00 PM	
March 18, 2021	Chi-Square Tests for Independence	Chapter 11
	ON-LINE D2L CHAT SESSION 10:00 - 11:00 AM	
March 23, 2021	Exam II	
March 25, 2021	Analysis of Variance: Differences between more than 2 Means	Chapter 10.5
	MYSTATA LAB HOMEWORK ASSIGNMENT 7 DUE NLT 10:00 PM	
March 30, 2021	Analysis of Variance: The Tukey-Kramer Procedure	Chapter 10.5
	ON-LINE D2L CHAT SESSION 10:00 - 11:00 AM	
April 1, 2021	Analysis of Variance: The Tukey-Kramer Procedure - Continued	Chapter 10.5
	MYSTATA LAB HOMEWORK ASSIGNMENT 8 DUE NLT 10:00 PM	

April 6, 2021	Correlation, Causation and Linear relationships	Chapter 12.1
	ON-LINE D2L CHAT SESSION 10:00 - 11:00 AM	
April 8, 2021	Simple Linear Regression Models	Chapter 10.4-12.2
April 13, 2021	Residual Analysis	Chapter 12.3-4
	ON-LINE D2L CHAT SESSION 10:00 - 11:00 AM	
	MYSTATA LAB HOMEWORK ASSIGNMENT 9 DUE NLT 10:00 PM	
April 15, 2021	Inferences about Slope Coefficients	Chapter 12.6-7
April 20, 2021	Thanksgiving Break	
April 22, 2021	Prediction Intervals for Linear Models	Chapter 12.8
	ON-LINE D2L CHAT SESSION 10:00 - 11:00 AM	
	MYSTATA LAB HOMEWORK ASSIGNMENT 10 DUE NLT 10:00 PM	
April 27, 2021	Multiple regression	Chapter 13
May 4, 2021	Exam III	

Suggested Practice Problems for Levine, Szabat, and Stephan; Seventh Edition by Section

Section 8.1-8.2
Problems 8.2, 8.8, 8.12, 8.16, 8.20 using EXCEL on either 16 or 20
Section 8.3-8.4
Problems 8.24, 8.26, 8.30, 8.34, 8.36, 8.38
Section 9.1
Problems 9.12, 9.14,
Section 9.2
Problems 9.16, 9.24
Section 9.3
9.38, 9.40, 9.42
Section 9.4
Problems 9.52
Section 14.2
Problems 14.2, 14.4
Section 14.5
14.12, 14.16
Section 10.1
Problems 10.2, 10.8, 10.10
Section 10.4
Problems 10.36, 10.38-10.42
Section 10.3
Problems10.32,10.34 **Section 11.1**
Problems 11.8, 11.10
Section 11.2
Problems 11.12, 11.14, 11.16

Section 11.3
Problems 11.22, 11.24
Section 10.5
Problems 10.51, 10.52, 10.55, 10.56, 10.60
Chapter 12
12.56 – 12.61, 12.64