

# **BUSI 2342 – Online**

## **Principles of Statistics**

Section 783 | Fall 2020 (8W1)

### **Syllabus**



#### Basic Information

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On-campus Office Hours: By appointment

This course is a Web Course and is conducted within Canvas <http://utpb.instructure.com>

**NOTE:** The due dates and times for the activities will adhere to the Central Time Zone.

#### Course Description

##### **Course Catalog Description:**

The course is an introduction to the principles of statistics and their application to problems in business and economics. Topics include the basics of probability theory, descriptive statistics, sampling methods, statistical estimation, hypothesis testing, and the basics of linear regression.

##### **Measurable Learning Outcomes:**

By the end of this course, you will be able to:

- Describe the basic principles of good data collection.
- Explain the principles and basic techniques for sampling as a data collection method and apply these techniques to collect a sample.
- Explain the principles and basic techniques for experiments as data collection method and apply these techniques to conduct an experiment.
- Apply basic techniques to display data distributions with graphs and interpret these graphs.
- Apply basic techniques to display and summarize data distributions with numbers, including the following tools for describing relationships: scatterplots and correlation, and linear regression.
- Explain the role of probability models when drawing conclusions from data.
- Explain, calculate, and interpret confidence intervals and tests of significance for population means and differences in population means.
- Explain, calculate, and interpret confidence intervals and tests of significance for population proportions and differences in population proportions.

**Prerequisites:** MATH 1324 (Applications of Discrete Mathematics)

## Materials

### Required Materials:

*The Practice of Statistics for Business and Economics*, 4th edition, by David S. Moore, George P. McCabe, Layth C. Alwan, and Bruce A. Craig. Publisher: W. H. Freeman (2016). ISBN-13: 978-1-4641-2564-5

*A few words about this textbook: Yes, I know that textbooks are outrageously expensive. However, David Moore is one of the best teachers of statistics. I have selected his textbooks for three reasons. He presents the best explanation of statistical methods of any textbook that I have seen. Also, he presents methods based on the current state of knowledge about statistics. Finally, his books provide many good real-world examples. Despite my experience and knowledge, I could not replicate the depth and quality of work in this textbook on my own. In short, with this textbook, you are getting the best resource that I can provide to you for learning about statistics, given the prerequisites for this course.*

### Other Materials:

Microsoft Excel is required. I will explain all numerical calculations using Excel. You may use a hand-held statistics calculator, if you wish. However, you are on your own in terms of learning how to use it.

## Important Academic Dates

UTPB [Academic Calendar](#)

## Course Expectations

You need to know what you are getting into with this course. Here is a quick heads up.

- This course is on a **7-week** schedule. However, **you get a full 16 weeks' worth of content and activities**. Hence, the course is fast paced.
- This course has no face to face contact with the instructor and limited on campus office hours. If you require face-to-face contact with the instructor in order to learn, please switch to an on-campus section of BUSI 2342.
- Due to the nature of this course (specifically, its fast pace and lack of face to face contact with the instructor), it is essential that you be strongly self-motivated and self-disciplined.
- You need to be able to access this course online. Please see the section, "Access to the Course," later in this syllabus for more details.

## Course Overview

This course is offered as a 7-week course. Content is organized in eight modules. By sheer coincidence, the textbook chapters are such we will cover one chapter per module. Hence, at our course web site, you will find module number and textbook chapter number match. We do not have group quizzes or homework in this course. **All work must be your own.**

### Readings:

Reading assignments cover the entire chapter unless I note otherwise.

Module 1: Examining Distributions. Readings: Chapter 1, sections 1 - 4

Module 2: Examining Relationships. Readings: Chapter 2, sections 1 - 5

Module 3: Producing Data. Readings: Chapter 3, sections 1 - 3

Module 4: Probability: The Study of Randomness. Readings: Chapter 4, sections 1 - 5

Module 5: Distributions for Counts and Proportions. Readings: Chapter 5, sections 1 - 3

Module 6: Introduction to Inference. Readings: Chapter 6, sections 1 - 4

Module 7: Inference for Means. Readings: Chapter 7, sections 1 - 2

Module 8: Inference for Proportions. Readings: Chapter 8, sections 1 - 2

Note: Modules 1 - 6 each include a MS Excel tutorial on how to carry out statistical calculations in MS Excel. Modules 7 - 8 each include a lecture that complements the assigned reading in the textbook as well as explanations for how to carry out statistical calculations in MS Excel. I strongly recommend that you work through this material as well as that in the textbook.

### Quizzes:

Quizzes primarily involve conceptual questions with multiple-choice answers, i.e., you select the best answer from the list that is given; a few questions may be true/false. There are seven quizzes in the course. Each quiz has a specific time limit as indicated in the instruction on every quiz. All quizzes are graded by Canvas immediately on submission. However, because the course is self-paced, I do not provide the correct answers in the interest of fairness to students who have already completed the quiz. If you wish to know the correct answer for a question that you missed, you may contact me directly; I will be happy to direct you to the course materials where you can find the correct answer. You may take a quiz up to three times; your final score **is the one you receive for your last attempt.**

### Homework Assignments:

Homework assignments are quantitative problems for which you type in a numerical answer or multiple choice where you must carry out a calculation and then chose the best answer. Homework is not timed. I provide the correct answers after you submit the

homework. (This policy differs from the quiz policy, because the majority of homework problems give each student a unique set of data on each attempt. Hence, the correct answer for such problems differs not only from student to student but from one attempt to the next attempt.) You may submit up to three times; your final score **is the one you receive for your last attempt.**

Note: While I do not collect your Excel workbooks in which you perform your calculations, I will be happy to provide you feedback on your problem setup.

### **Pacing of the Course:**

This course is self-paced. I provide you with guidelines in the course in Canvas on when you should complete each module's activities. My guidelines appear in two ways. First, I list "due dates" on the course Syllabus page. Second, the instructions for each graded activity list a "due date." However, all graded activities remain open until the end of the semester. There is no penalty for completing a quiz or homework assignment after its due date provided that you complete it by the end of the semester.

A self-paced course has one big advantage and one big disadvantage compared to a course with a series of deadlines over the semester. The advantage is obvious. The big disadvantage is that you do not have a formal set of staggered deadlines to motivate you to keep up. **A warning: the content of this course cannot be mastered in one week. If you procrastinate, then you are at great risk of failing this course.** I almost never grant incompletes in the courses I teach and under NO circumstance will I consider an incomplete for any student who has not kept up with the course.

### **Grading:**

Each assignment is worth a specified number of points. You can find the point information in the assignment instructions in Canvas. The weight of each assignment is determined by its point value. Barring changes during the semester (of which I will advise you), the total points possible in this course are 1,078. Thus, for example, an assignment worth 57 points counts as  $57/1,078 = 5.29\%$  of your course grade, an assignment worth 104 points counts as  $104/1,078 = 9.65\%$  of your grade, and so forth.

<b>Course Activity</b>	<b>Points</b>	<b>Percentage of Total Grade</b>
7 Quizzes	339	31.45%
7 Homework Assignments	739	68.55%
<b>Total</b>	<b>1078</b>	<b>100.00%</b>

Note: Unless otherwise stated, all materials, activities, and assessments are required and are not optional.

At end of the semester, I add up all of the points that you have earned and divide by 1,078. That calculation determines your numerical course grade.

## Grading Scale:

Grade Range	Letter Grade
90 and above	A
80 to 89	B
70 to 79	C
60 to 69	D
Less than 60	F

+/- may be assigned to the final letter grade at the instructor's discretion.

## Communication:

I do not check my voicemail (office phone) regularly; therefore, email is the best way to contact me. I check my email daily Monday through Friday during normal business hours. You can expect a reply from me via email within 24 hours during the work week. You \*may\* get an email reply during the weekend, but that would be an exception not the rule.

## Time Management:

A student should expect to spend three hours on preparation and learning assignments for every semester credit hour. If a class is a 3-semester credit hour class, it is expected that a student should spend at least 9 hours out of class on assignments in addition to 3 hours of in-class time for a total of about 12 hours per week. It is important to develop a Time Management Plan to be successful.

## Policies

### Discussion Board

Discussion Board is primarily for discussing course related topics and issues. Best practices are:

- Read all message postings in online discussion.
- Respond to the question directly
- Use a person's name in the body of your message when you reply to their message.
- Avoid postings that are limited to 'I agree' or 'great idea', etc.
- Ensure responses to questions are meaningful, reflective.
- Support statements with concepts from course readings, refer to personal experience, examples.

- Follow **Rules of Behavior (below)**.

### **Rules of Behavior**

Discussion areas are public to every student in this class (including your instructor) who will see what you write. Please pay attention to the language you use and adhere to the following guidelines:

- Do not post anything too personal.
- Do not use language that is inappropriate for a classroom setting or prejudicial in gender, race, or ethnicity.
- Do not use all caps in the message box unless you are emphasizing (it is considered shouting).
- Be courteous and respectful to other people on the list.
- Do not overuse acronyms like you would use in text messaging. Some of the list participants may not be familiar with acronyms.
- Use line breaks and paragraphs in long responses.
- Write your full name at the end of the posting.
- Be careful with sarcasm and subtle humor; one person's joke is another person's insult.

### **Make-Up/Late Submission Policy**

All quiz and homework assignments have their own “due dates.” However, all graded activities remain open until the end of the semester. There is no penalty for completing a quiz or homework assignment after its due date provided that you complete it by the end of the semester.

### **Academic Dishonesty/Plagiarism/Cheating**

The academic community regards academic dishonesty as an extremely serious matter, with serious consequences. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. Any suspicion of academic dishonesty will be reported and investigated. A student who engages in scholastic dishonesty that includes, but is not limited to cheating, plagiarism, and collusion will receive an “F” for the course.

All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. For complete information on UTPB student conduct and discipline procedures consult the [University's Handbook:Scholastic Dishonesty](#).

**Academic dishonesty** includes, but is not limited to cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student

such as, but not limited to, submission of essentially the same written assignment for two courses without the prior permission of the instructor, or the attempt to commit such acts.

**Plagiarism** includes, but is not limited to the appropriation of, buying, receiving as a gift, or obtaining by any means material that is attributable in whole or in part to another source, including words, ideas, illustrations, structure, computer code, other expression and media, and presenting that material as one's own academic work being offered for credit.

### **Attendance and Class Participation**

Regular and active participation is an essential, unmistakably important aspect of this online course. Students will log on a minimum of three times every seven days. All students are expected to do the work assigned, notify the instructor when emergencies arise.

### **Tracking**

Learning management systems have tracking features. Statistics are collected that quantifies how often and when students are active in the course and provides information if the student has accessed different pages of the course.

### **Absenteeism**

All the course activities have set dates to be completed and submitted. After the due dates the activities will not be available for the students. Not logging into an online course is considered absenteeism. Contact instructor immediately in case of emergency medical situation.

### **Course Incomplete/Withdrawal/Grade Appeal**

All students are required to complete the course within the semester they are signed up. Incomplete grades for the course are rarely given, will only be granted if the student provides a valid, documented excuse for not being able to complete the course on time, must complete at least 80% of the course, and has contacted the instructor prior to the scheduled last class to request an extension. The student signs a contract that includes the incomplete course activities and the new due dates.

Find information and dates regarding drops and withdrawals consult the University Handbook: [Drops and Withdrawals](#) and [Appeal Process](#).

### **Accommodation for Students with Disabilities**

**Students with Disabilities:** The University of Texas Permian Basin in compliance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act provides “reasonable accommodations” to students with disabilities. Only those students, who an

Instructor has received an official Letter of Accommodation (LOA) sent by the Office of ADA for Students, will be provided ADA academic accommodations.

**ADA Officer for Students:** Mr. Paul Leverington  
**Address:** Mesa Building 4242/4901 E. University, Odessa, Texas 79762  
**Voice Telephone:** 432-552-4696  
**Email:** ada@utpb.edu

For the accessibility and privacy statements of external tools used within courses, go to [Accessibility and Privacy Statements](#).

## Computer Skills, Technical & Software Requirements

You must have a computer, webcam, and a decent internet connection. This course is designed as a 7-week web-based class. Thus, you should be sufficiently comfortable in an online environment to handle basic web navigation and to upload and download assignments in Canvas. This course is not designed for hand-held devices. The best environment for viewing and participating in this course is a desktop or laptop computer.

***You are responsible for managing your browser and internet access.*** Malfunctioning of your computer, your browser, or your internet connection will not be acceptable excuses for meeting the course expectations and completing the graded work by the end of the semester!

In addition, you are responsible for installing Microsoft Excel on your computer. (You can find a link to information about UTPB Office 365 Accounts in the Welcome to Principles of Statistics module in our course in Canvas. The introductory module in the course includes an introduction, "New to Canvas and Course Navigation." The Help button in the global navigation panel on the far left in Canvas will link you to additional resources about navigating and using Canvas.

Students can use cloud version of Word, PowerPoint and other Microsoft products through use of their UTPB Outlook 365 and UTPB email address. For more information refer to [UTPB Office 365 Page](#).

**Computer Technical Requirements:** See [Technical Requirements](#).

## Online Student Authentication

UTPB requires that each student who registers for an online course is the same student who participates in, completes, and receives credit for the course. UTPB's Distance Education Policy requires faculty members to employ at least two methods of verification to ensure student identities. To access online courses students must login to the UTPB learning management system using their unique personal identifying username and secure password. UTPB's Distance Education Policy requires at least one additional student identification method within the course that has been determined and approved by the faculty or academic program. This course satisfies the second method of student

authentication by presentation of approved photo ID through a web cam and video recorded proctoring during assessment (Respondus Monitor). Approved photo identifications are: passports, government issued identification, driver's licenses, military ID from DoD; dual credit and early college high school students use school district identifications.

The University has a contract with Respondus that provides online UTPB faculty with an electronic test proctoring service that also serves as a second method of student authentication. Respondus Monitor both locks down the student's browser preventing the student from accessing the web or computer files during an exam and video records the student during the exam period. Students present their ID into the camera (which UTPB requires for all online courses) to authenticate themselves, and the camera records the student and their surrounding environment during the test.

Your only technical requirements are a computer, webcam, and a decent internet connection.

### Using LockDown Browser & Respondus Monitor for Online Quizzes

This course requires the use of LockDown Browser and Respondus Monitor when you take a quiz. I do not require these tools for other graded activities. Watch this [short video](#) to get a basic understanding of LockDown Browser and Monitor.

Note: In BUSI 2342, you will not use LockDown Browser for Quizzes 1 and 2. Both quizzes require that you have an Excel workbook open. LockDown Browser would not let you have other documents open while taking the quiz.

Download and install [LockDown Browser](#). To take an online quiz, open LockDown Browser which opens Canvas and navigate to the quiz. (You cannot access the quiz with a standard web browser.) When taking an online quiz, follow these guidelines:

- Setup web cam for quizzes using Monitor.
- Ensure you're in a location where you won't be interrupted.
- Turn off all mobile devices, phones, etc.
- Clear your desk of all external materials — books, papers, other computers, or devices. Note: *I do permit you to use your textbook and class notes (hand written or printed in advance).*
- Remain at your desk or workstation for the duration of the test.
- LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted.

## Preparation for Emergencies

### Computer Crash

Not having a working computer or a crashed computer during the semester will NOT be considered as an acceptable reason for not completing course activities at a scheduled time. Note: Identify a second computer before the semester begins, that you can use when/if your personal computer crashes.

### Complete Loss of Contact

If you lose contact with course connectivity completely (i.e., you cannot contact me via Canvas or email), you need to call instructor, and leave message regarding connectivity loss and contact information.

### Lost/Corrupt/Missing Files

You must keep/save a copy of every project/assignment on an external drive, UTPB Outlook 365 OneDrive, or personal computer. In the event of any kind of failure (e.g., virus infection, student's own computer crashes, loss of files in cyberspace, etc.) or any contradictions/problems, you may be required to resubmit the files.

## End-of-Course Evaluation & Instructor Evaluation

Every student is encouraged to complete an end of course evaluation survey provided by UTPB. During the last two weeks of class, there will be an announcement in Canvas, an email, and a button in your course navigation that will take you to any available surveys.

The survey is anonymous and your responses are confidential. Your feedback is critical to us and to your instructor as we strive to improve our offerings, and our support of you, the students.

## Student Support Services

SERVICE	CONTACT
ADA Accommodation/Support	<a href="#">Services for Students with Disabilities</a> (432) 552-4696
Testing Services	<a href="#">Testing Services &amp; Academic Accommodations Department</a> (432) 552-2630
Advising	<a href="#">UTPB Academic Advising Center</a> (432) 552-2661
Bookstore	<a href="#">UTPB Campus Bookstore</a> (432) 552-0220
Email, Office 365, my.utpb.edu	<a href="#">Information Technology</a>
Financial Aid and Scholarship	<a href="#">UTPB Financial Aid</a> (432) 552-2620

SERVICE	CONTACT
Library	The <a href="#">J. Conrad Dunagan Library</a> Online at (432) 552-2370
Registrar	<a href="#">UTPB Registrar</a> (432) 552-2635
Student Services	<a href="#">Student Services</a> (432) 552-2600
Technical Support	<a href="#">Canvas</a> 1-866-437-0867
Tutoring & Learning Resources	If you are taking courses through UTPB the following links provide services: <a href="#">Smarthinking Online Tutoring</a> (provides tutoring services), <a href="#">SmarterMeasure</a> (measures learner readiness for online course).

## Disclaimer & Rights

Information contained in this syllabus was to the best knowledge of the instructor considered correct and complete when distributed for use in the beginning of the semester. However, the instructor reserves the right, acting within the policies and procedures of UTPB to make changes in the course content or instructional techniques without notice or obligation. The students will be informed about the changes, if any.

## Copyright Statement

Many of the materials that are posted within UTPB courses are protected by copyright law. These materials are only for the use of students enrolled in the course and only for the purpose of the course. They may not be further retained or disseminated.

## Schedule

Module	Topics	Assignments		Due Date
1	Examining Distributions	Quiz 1	Homework 1	Mon. Aug. 31
2	Examining Relationships	Quiz 2	Homework 2	Mon. Sep. 7
3	Producing Data	Quiz 3	-	Mon. Sep. 14
4	Probability: The Study of Randomness	Quiz 4	Homework 4	Mon. Sep. 21
5	Distributions for Counts and Proportions	Quiz 5	Homework 5	Mon. Sep. 28
6	Introduction to Inference	Quiz 6	Homework 6	Mon. Oct. 5
7	Inference for Means	Quiz 7	Homework 7	Mon. Oct. 12
8	Inference for Proportions	-	Homework 8	Fri. Oct. 16