

BSTAT 3321 - 001 – Business Statistics I

Syllabus - Spring, 2018

INSTRUCTOR: Ms. Su, J. PhD Candidate

OFFICE: COBA 528

OFFICE HOURS: Mon. 8:50 to 10:00 A.M. or by E-Mail appointment

PHONE: 817-272-3502

E-MAIL: jingjie.su@uta.edu

CLASS MEETING TIME: Mon., Wed. & Fri. 8:00 to 8:50 A.M.

CLASSROOM: COBA147

PREREQUISITE: Math 1316 or Calculus

COURSE DESCRIPTION: (From catalog) Application of statistical techniques to business and economic data. Topics include descriptive statistics, probability distributions, estimation, inference, regression, correlation, and time series.

TEXT MATERIALS NEEDED:

- (1) Business Statistics: Communicating with Numbers, 2nd Edition by Jaggia/Kelly. You can purchase an access code to the “Connect System” which will come with an E-Book from UTA bookstore. If you would like to purchase the text book in other place, please make sure the book come with the Connect access code. Connect system will be used for the on-line Learn Smart and homework (automatically graded and recorded). The E-book in the Connect system will be valid for one year.
- (2) Connect System – YOU MUST HAVE CONNECT. THERE IS NO OTHER OPTIONS FOR COMPLETEING THE ONLINE HOMEWORK. You can use the courtesy access for free trial 14 days.
- (3) A Spreadsheet PC package (preferably Excel) that has some statistical capabilities.

COURSE MATERIAL NEEDED:

- (1) 4 Scantrons, number 882E
- (2) A basic calculator that can do arithmetic operations and square roots. The calculator needs to be able to show up to 4 decimal places.

COURSE OBJECTIVE: The course introduces the student to the basic principles and applications of descriptive and inferential statistics. The course assists students to become knowledgeable consumers of statistical analysis, its applications and limitations.

LEARNING OUTCOMES:

1. The student will be able to explain the rationale for randomness in data collection, select a simple random sample and describe a data set verbally, graphically, and numerically.
2. The student will be able to apply the complement, addition, and multiplication laws of probability.
3. The student will be able to distinguish between discrete and continuous random variables, find binomial and normal probabilities using tables, and compute expected value and variance for a binomial distribution.
4. The student will be able to state the Central Limit Theorem and use the sampling distributions to find probabilities for the sample mean and sample proportion.
5. The student will be able to construct and interpret confidence intervals for a population mean and a population proportion and to determine sample sizes for given levels of confidence and margins of error.
6. The student will be able to test hypotheses about a population mean and a population proportion and to interpret the results.
7. The student will be able to fit and interpret simple linear regression models along with the usual inferences.
8. The student will be able to construct graphs, compute descriptive statistics, make inferences and fit simple regression models using appropriate software such as Excel.

COURSE REQUIREMENTS:

1. Explain the rationale for randomness in data collection, select a simple random sample and describe a

data set verbally, graphically, and numerically.

2. Apply the complement, addition, and multiplication laws of probability.
3. Distinguish between discrete and continuous random variables, find binomial and normal probabilities using tables, and compute expected value and variance for a binomial distribution.
4. State the Central Limit Theorem and use the sampling distributions to find probabilities for the sample mean and sample proportion.
5. Construct and interpret confidence intervals for a population mean and a population proportion and to determine sample sizes for given levels of confidence and margins of error.
6. Test hypotheses about a population mean and a population proportion and to interpret the results.
7. Fit and interpret simple linear regression models along with the usual inferences.
8. Construct graphs, compute descriptive statistics, make inferences and fit simple regression models using appropriate software such as Excel.

GRADING POLICY

<u>TEST*/ASSIGNMENT</u>	<u>POINT VALUE</u>	<u>FORMAT</u>	
Learn Smart	40	online	
Homework	160	online	
Exam 1	150	Multiple Choice	Chapter 1-4
Exam 2	150	Multiple Choice	Chapter 5-7
Exam 3	150	Multiple Choice	Chapter 8-9
Comprehensive Final	350	Multiple Choice	Comprehensive
Bonus Point	30	In-class group project	

Note: In-class group project will be randomly assigned during class periods.

GRADES: A = 900 and above, B = 800 - 899.999999, C = 700 - 799.999999, D = 600 - 699.999999, F = 0 - 599.999999.

TESTS: There will be four closed-book exams. One single, two-sided study sheet (8 1/2 by 11 inches) will be allowed for each exam. Three study sheets (8 1/2 by 11 inches) will be allowed for the Final Exam. You may include anything on the study sheet. If bad weather prevents a class from being held, then the schedule will be moved down a class day.

You must bring a Scantron 882E to each exam. Basic calculator is also needed for each exam.

LEARN SMART & HOMEWORK: These are accessible through the “Blackboard/Course Material”. ALWAYS use the Blackboard link to access the homework in order to avoid grade sync problems. Due dates are listed in the course calendar and the due time is 1 hour before the class period begins on the due date. You have unlimited attempt to finish Learn Smart before the due date. For homework, you have 2 attempts to finish the homework before the due dates and each attempt has 3 chances of “check my answer”. The 2nd attempt will result in 10% deduction of the homework grade.

PRACTICE QUIZ: Practice quiz are not contributing to your grade but they are the similar format questions that you will have in exams.

BONUS POINT PROJECT: There will be two or three projects randomly assigned during some class periods. You will need to form a group of three or four, solve the problem that assigns to you. One group will be asked to present their solutions in the class.

MAKE-UP EXAMS: Your grade on the final (after convert to the 150-point scale) will be used to replace any one grade for those who have missed an exam due to illness, required travel associated with your job, or death in the immediate family. Any requests for this missed-grade replacement must be accompanied by written documentation: doctor's excuse, letter by your superior on company letterhead, etc. Lack of time to prepare for an exam or too many exams on one day will not be considered as sufficient reasons for a make-up. The final

can serve as a make-up for only one exam.

TUTORING CENTER: Both Business and Math department is offering tutoring center for statistics. Please use these resources to solve your problems.

COBA Stats Lab: Located at COBA first floor tutoring center COBA136. Detailed schedule can be found in office COBA535.

ATTENDANCE AND DROP POLICY: At The University of Texas at Arlington, taking attendance is not required but attendance is a critical indicator in student success. Each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I require that students read and be prepared to discuss the assigned textbook chapters and suggested exercises on the scheduled class days. Class attendance will be recorded but it will not be used as a part of your grade. However, while UT Arlington does not require instructors to take attendance in their courses, the U.S. Department of Education requires that the University have a mechanism in place to mark when Federal Student Aid recipients "begin attendance in a course." UT Arlington instructors will report when students begin attendance in a course as part of the final grading process. Specifically, when assigning a student a grade of F, faculty report the last date a student attended their class based on evidence such as a test, participation in a class project or presentation, or an engagement online via Blackboard. This date is reported to the Department of Education for federal financial aid recipients.

Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://web.uta.edu/aao/fao/>).

A student dropping a course after the Census Date but on or before the appropriate final drop date will receive a grade of "W" **only** if at the time of dropping, the student is passing the course (has a grade of A, B, C, or D); otherwise an F will be received.

BLACKBOARD: All assignments and exercises will be submitted through Blackboard. Grades will be posted on that site also. Blackboard is found at <http://elearn.uta.edu>.

ASSIGNMENTS: Assignments will need to be done using a computer spreadsheet package. The College of Business has several PC labs with Excel software for student use. Hours of operation will be announced when available. The results should be summarized and typed in a technical paper format.

Assignments will be submitted using Blackboard. The submitted assignments will be automatically checked for plagiarism and collusion using Blackboard's SafeAssignment protocol.

EXPECTATIONS FOR OUT-OF-CLASS STUDY: A general rule of thumb is that for every credit hour earned, a student should spend 3 hours per week working outside the class. Hence, a three-credit hour course would have a minimum expectation of 9 hours of reading, studying, preparing assignments, etc.

ACADEMIC INTEGRITY: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

UT Arlington faculty members may employ the Honor Code in their courses by having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University. Additional information is available at <https://www.uta.edu/conduct/>.

ELECTRONIC COMMUNICATION: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

DISABILITY ACCOMMODATIONS: UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA)*, *The Americans with Disabilities Amendments Act (ADAAA)*, and *Section 504 of the Rehabilitation Act*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of a **letter certified** by the Office for Students with Disabilities (OSD). Only those students who have officially documented a need for an accommodation will have their request honored. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting: **The Office for Students with Disabilities, (OSD)** www.uta.edu/disability or calling 817-272-3364. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability.

Counseling and Psychological Services (CAPS) www.uta.edu/caps/ or calling 817-272-3671 is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

CAMPUS CARRY: Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit <http://www.uta.edu/news/info/campus-carry/>

ABSENCES BASED ON RELIGIOUS BELIEFS: A student who misses an examination, work assignment, or other Assignment due to the observance of a religious holy day will be given the opportunity to complete the work missed within 15 days following the due date of the assignment, test, or other Assignment missed. To be eligible for such a make-up, the student must notify me in writing of classes scheduled on dates he or she will be absent to observe a religious holy day. Notification must be made within the first 15 (fifteen) class days through either a written correspondence, personal delivered, acknowledged and dated by me or written correspondence sent certified mail, return receipt requested to me. Failure to follow the rules provided above within the time frames listed will result in the absence being considered unexcused.

TUITION: Students who have not paid by the census date and are dropped for non-payment cannot receive a grade for the course in any circumstances. Therefore, a student dropped for non-payment who continues to attend the course will not receive a grade for the course. Emergency loans are available to help students pay tuition and fees. Students can apply for emergency loans by going to the Emergency Tuition Loan Distribution Center at E.H. Hereford University Center (near the southwest entrance).

STUDENT FEEDBACK SURVEY: At the end of each term, students enrolled in face-to-face and online classes categorized as "lecture," "seminar," or "laboratory" are directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback via the SFS database is aggregated with that of other students enrolled in the course. Students' anonymity will be protected to the extent that the law

allows. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law and aggregate results are posted online. Data from SFS is also used for faculty and program evaluations. For more information, visit <http://www.uta.edu/sfs>.

FINAL REVIEW WEEK: For semester-long courses, a period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

NON-DISCRIMINATION POLICY: The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos.

TITLE IX POLICY: The University of Texas at Arlington ("University") is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. *For information regarding Title IX, visit www.uta.edu/titleIX or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or jmhood@uta.edu.*

STUDENT SUPPORT SERVICES: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include [tutoring](#), [major-based learning centers](#), developmental education, [advising and mentoring](#), personal counseling, and [federally funded programs](#). For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at <http://www.uta.edu/universitycollege/resources/index.php>.

GRADE GRIEVANCES: Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current graduate catalog. For undergraduate courses, see http://web.uta.edu/catalog/content/general/academic_regulations.aspx#19; for graduate courses, see http://grad.pci.uta.edu/about/catalog/current/general/regulations/#grade_grievances

EMERGENCY EXIT PROCEDURES: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

<p>Emergency Phone Numbers In case of an on-campus emergency, call the UT Arlington Police Department at 817-272-3003 (non-campus phone), 2-3003 (campus phone). You may also dial 911.</p>
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TENTATIVE COURSE SCHEDULE:

<u>Date</u>	<u>Chapter and Sections</u>	<u>Topics</u>	<u>Due Dates and Notes</u>
Jan-17	Syllabus & Chapter 1	Introduction to Course	
Jan-19	Chapter 1	Types of Data	
Jan-22	Chapter 2	Graphical Descriptions of Data	Bring Laptop with Excel
Jan-24			
Jan-26	Chapter 3.1, 3.2, 3.4, 3.6, 3.8	Numerical Descriptions of Data	Bring Laptop with Excel
Jan-29			
Jan-31			
Feb-2	Chapter 4.1-4.4	Basic Rules of Probability	
Feb-5			
Feb-7			
Feb-9			
Feb-12	Exam 1		Chapter 1-4 Homework & Learn Smart
Feb-14	Chapter 5.1,5.2,5.4	Discrete Probability Distributions	
Feb-16			
Feb-19			
Feb-21	Chapter 6.1-6.3	Continuous Probability Distributions	
Feb-23			
Feb-26			
Feb-28	Chapter 7.1-7.3	Sampling Distributions	
Mar-2			
Mar-5			
Mar-7			
Mar-9	Spring Break		
Mar-12			
Mar-14			
Mar-16			
Mar-19	Exam 2		Chapter 5-7 Homework & Learn Smart
Mar-21	Chapter 8.1-8.4	Confidence Intervals for Means and Proportions	
Mar-23			
Mar-26			
Mar-28			
Mar-30	Chapter 9	Introduction to Hypothesis Testing	
Apr-2			
Apr-4			
Apr-6			
Apr-9			
Apr-11			
Apr-13			
Apr-16	Exam 3		Chapter 8-9 Homework & Learn Smart
Apr-18	Chapter 14	Simple Linear Regression/Multiple linear regression/Goodness of Fit	Bring Laptop with Excel
Apr-20			
Apr-23			

Apr-25		Measures	
Apr-27	Chapter 15.1, 15.2	Inference with Regression Models	
Apr-30			
May-2			
May-4			
Check date below	Final (Comprehensive)	May-11* (Check date below)	Chapter 14-15 Homework & Learn Smart

[UTA's Final Exam Schedule Spring, 2018](#)

Note: Check the Academic Calendar for exact drop date

The instructor reserves the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course.