

BSTAT 3322 Syllabus – Spring, 2017

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Course number, sections, day, time and place of classes:

BSTAT 3322-002: COBA 241, Mondays and Wednesdays, 5:30-6:50 p.m.

Office Hours: By appointment.

Description of Course Content: Application of Statistical techniques to business and economic problems. Topics include simple linear regression and correlation, multiple regression, model building, analysis of variance, time series analysis and chi-square test of significance.

Student Learning Outcomes:

1. The student will be able to fit and evaluate simple regression models and make and interpret inferences in this context when appropriate.
2. The student will be able to fit and evaluate multiple regression modes and make and interpret inferences in this context when appropriate.
3. The student will be able to build, interpret, and use multiple regression models using specified variable selection criteria.
4. The student will be able to analyze time series data using the classical decomposition model.
5. The student will be able to forecast using time series models with linear trend and seasonality.
6. The student will be able to distinguish experiments from observational studies and restrict causal inference to experiments.
7. The student will be able to define, identify, design, analyze and interpret completely randomized one way and factorial designs and randomized block designs.
8. The student will be able to build regression models and make appropriate inferences; analyze and forecast a time series variable; and design and analyze and interpret using appropriate software such as NCSS.

Textbook and Other Course Materials:

Business Statistics – Communication with Numbers, Jaggia/Kelly, 2nd Edition

This is the text we will be working out of this term, and it can be purchased through the UTA bookstore. Through the UTA bookstore you can choose either an E-Book/Connect bundle OR a Looseleaf/Connect bundle. Either will come with access to the software that you **MUST** have for this course. An earlier edition (without Connect) **WILL NOT WORK**. If you do not have the Connect software access, you will have no way to complete assignments and quizzes.

A McGraw-Hill representative will be in class on Monday, August 29, to guide the class through the E-Book/Connect purchase and registration process. I STRONGLY advise you to delay purchasing your text until this presentation.

We will also be working with free versions of R and SAS.

Descriptions of major assignments and examinations with due dates: There will be three intra-term examinations -- one on September 26, another on October 19, and another on November 23 – and a cumulative final on December 12.

Grading: Students will be assessed via the intra-term examinations (three at 20% each), the final examination (20%), and various quizzes and assignments (20%).

A standard 10-point grade scale will be in effect (i.e., 90-100 = A, 80-89 = B, etc.).

Students are to remember that grades are earned on the basis of performance, not given on the basis of effort or need. Your grade represents your performance in this course, not your potential as a student or a person. If you feel an error has been made in the calculation of your grade, you may contact me via email. For other circumstances, I will not respond to emails about grades.

Attendance: 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 will rarely if ever take attendance. 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.

Examinations: All assignments, quizzes and examinations will be administered either through Connect or through Blackboard. Please see this page (<http://www.uta.edu/blackboard/students/quick-tips.php>) for guidance regarding compatibility with Blackboard. You are responsible for ensuring that your system (hardware, software, etc.) conforms to requirements. For exams, you will be required to have a webcam to facilitate Blackboard's proctoring service.

Feedback timetable: You will receive grades on exams or assignments no later than one week after assignments are due or exams are administered.

Expectations for Out-of-Class Study: Students enrolled in this course should expect to spend between six and nine hours per week in course-related activities, including reading required materials, completing assignments, preparing for exams, etc.

Drop Policy: 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://www.uta.edu/aao/fao/>).

Absences based on Religious Beliefs: A student who misses an examination, work assignment, or other project 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 project 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.

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** (www.uta.edu/disability or 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 (www.uta.edu/caps or 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.

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.*

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/>.

Work outside of class: Exams, essays, papers, problem sets, etc., are to be done *on your own*. This means that unless I *specifically* authorize it, you are not to collaborate with (or receive assistance from) anyone else in this course.

Any outside-of-class work that you hand in should conform to common professional presentation standards. While I will grade handwritten work on its merits, such work will incur an automatic 30-point penalty. For example, work that would have commanded a grade of 90 would, if handwritten, receive a grade of 60 ($[0.90 \times 100] - 30$ points).

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>.

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/>

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.

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.

The IDEAS Center (2nd Floor of Central Library) offers **free** tutoring to all students with a focus on transfer students, sophomores, veterans and others undergoing a transition to UT Arlington. To schedule an appointment with a peer tutor or mentor email IDEAS@uta.edu or call (817) 272-6593.

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 undergraduate catalog.

Course Schedule: A tentative schedule for this term accompanies this syllabus. I reserve the right to adjust and/or alter the course outline as circumstances warrant.

Tentative Course Schedule

<u>Week</u>	<u>Class Dates</u>	<u>Topic/Activity</u>
1	Aug. 29, 31	Introduction/Review of Inference
2	Sep. 7	Two-Population Hypothesis Tests
3	Sep. 12, 14	ANOVA
4	Sep. 19, 21	ANOVA
5	Sep. 26, 38	Exam 1 /Correlation
6	Oct. 3, 5	Simple Linear Regression
7	Oct. 10, 12	Regression (Cont'd)
8	Oct. 17, 19	Regression (Cont'd)/ Exam 2
9	Oct. 24, 26	Model-Building/Model Validation
10	Oct. 31, Nov. 2	Building/Validation (Cont'd)/Time Series
11	Nov. 7, 9	Time Series
12	Nov. 14, 16	Time Series/Logistic Regression
13	Nov. 21, 23	Logistic Regression/ Exam 3
14	Nov. 28, 30	Chi-Square Tests
15	Dec. 5, 7	Chi-Square Tests (Cont'd)
16	Dec. 12	Final Exam