

**THE UNIVERSITY OF TEXAS AT EL PASO**  
**COLLEGE OF SCIENCE**  
DEPARTMENT OF MATHEMATICAL SCIENCES

Course #:	STAT 4385 (CRN 23424 )
Course Title:	Applied Regression Analysis
Credit Hrs:	3
Term:	Spring 2020 (Instruction 01/21/2020 – 05/07/2020)
Course Meetings & Location:	Liberal Arts Building 207 12:00-1:20pm MW
Prerequisite Courses:	Minimum Grade of C on STAT 2480 or 3330 or 3320.
Instructor:	Xiaogang Su
Office Location:	Bell Hall 320
Contact Info:	Phone: (915) 747-6860 [O] <a href="mailto:xsu@utep.edu">xsu@utep.edu</a> Fax: (915) 744-6502
Office Hours:	3:00-4:00pm MW
Class Web page:	<a href="https://sites.google.com/site/xgsu00/stat4385">https://sites.google.com/site/xgsu00/stat4385</a>
Textbook(s), Materials:	Required: <i>A Second Course in Statistics: Regression Analysis</i> , 7th Edition by Mendenhall & Sincich. ISBN-13: 978-0321691699  Suggested: Special reprint of <i>Applied Linear Statistical Models</i> , 5th ed., by Kutner, Neter, Nachtsheim & Li (2012).

**Course Description and Learning Outcomes:** Students will learn to apply appropriate statistical techniques on model building, fitting, validation and subsequent inferences for various problems. Through assigned homework, class discussions and hands-on labs, students will also acquire skills to identify real problems that require advanced mathematical and statistical knowledge. The course will cover statistical inference (hypothesis tests and confidence intervals), simple and multiple linear regression, experimental design. This course will provide a coverage of topics and methodologies common in survival analysis. Students will have opportunities to gain hands-on experiences with real-world data projects.

- Topic Outline**
1. Introduction & Review: probability, expectation, distributions, statistical inference, types of regression models.
  2. Simple linear regression models
  3. Multiple linear regression models
  4. Model selection
  5. Model diagnostics
  6. Several special models: one/two-way ANOVA, ANCOVA, interaction, polynomial models.
  7. Logistic models and GLM (if time allows)
  8. Nonparametric nonlinear models (if time allows)

Course Activities/Assignments: The course will be taught with in-class instruction. Homework and computer projects will be assigned throughout the semester. We will also have midterm exams, pop quizzes, and a final exam. **NO LATE COURSEWORK WILL BE ACCEPTED, EXCEPT EXTREME SCENARIOS.**

Course Schedule: 03/16 - 03/20 Spring Break  
 03/27 Cesar Chavez Birthday  
 04/10 Spring Study Day  
 05/11 - 05/15 Final Exam Period  
 04/03 Course Drop Date

Final Exam Schedule: TBA

Make-up Policy: All other assignments must be turned in on time.

Grading Policy: There will be a few of R-based computer project assignments and possibly a few in-class quizzes, which make up 20% to your final score. There will be three midterm exams, each making up 20% and the final exam is comprehensive worth 25%. No make-up exam will be given and no late project submission is accepted without justifiable reasons.

	Date and Time	Proportion
Midterm Exam I	02/26 Wednesday 12:00–1:20 pm	20%
Midterm Exam II	04/01 Wednesday 12:00–1:20 pm	20%
Midterm Exam III	04/22 Wednesday 12:00–1:20 pm	20%
Homework	See class website	20%
Final Exam	TBA	25%

Note that there is 5% extra credit; however, the five extra credits are only applicable to those who complete all assignments and exams without ANY unexcused absence from class attendance. Letter grades are determined according to the following scale.

Grade Score  
 A 90+  
 B 80-89  
 C 70-79  
 D 60-69  
 F <60

Attendance Policy: Class attendance is **REQUIRED** and helpful to decide borderline grades. If a student has to be absent from a particular class, he/she will be responsible for catching up with course material. A late arrival of 15 minutes or more will be considered as an absence. Students will be dropped for four or more unjustified absences from class or lab session. Your academic advisor will be consulted before final action is decided and taken. Any unjustified absences from class or lab session will cause loss of eligibility of receiving extra credits. If you expect to miss up to 10 class hours for ANY REASON, then please do not consider taking this course.

Academic Integrity Policy: Please see <http://academics.utep.edu/Default.aspx?tabid=23785>

**Civility Statement:** This is a class where participation is required. You will be participating in classroom discussions. All students will be treated with respect. Calculators may not be shared during quizzes and exams. Please do not use cell phones, pagers, iPods, MP3 players, blue tooth devices, etc. during class. Cell phones and pagers should be set to silent or vibrate, and any calls should be taken outside of class. Please do not wear headsets or blue tooth devices during class. Please don't talk in class. Cell phone calculators may not be used on quizzes or exams. Active participation in class is expected, teamwork in class will be implemented.

**Disability Statement:** If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to [cass@utep.edu](mailto:cass@utep.edu), or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at [www.sa.utep.edu/cass](http://www.sa.utep.edu/cass).

**Military Statement:** If you are a military student with the potential of being called to military service and /or training during the course of the semester, you are encouraged to contact me as soon as possible.

**UTEP College of Science Policies** Watch out for the UTEP drop/withdraws deadline for the semester. The College of Science will remain aligned with the University and not approve any drop requests after that date.

All grades of Incomplete must be accompanied by an Incomplete Contract that has been signed by the instructor of record, student, departmental chair, and the dean. Although UTEP will allow a maximum of one year to complete this contract, the College of Science requests it be limited to month based upon completion data. A grade of Incomplete is only used in extraordinary circumstances confined to a limited event such as a missed exam, project, or lab. If the student has missed a significant amount of work (e.g. multiple assignments or tasks), a grade of Incomplete is not appropriate or warranted.