

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

Course #: 23966  
Course Title: Stat 4385: Applied Regression Analysis  
Credit Hrs: 3.0  
Term: Spring 2018  
Course Meetings & Location: MW 4:30 pm - 5:50 pm at Liberal Arts Building 122  
Prerequisite Courses: Stat 2480 (w/ C or better) or Stat 3325 (w/ C or better)  
Instructor: Dr. Michael Pokojovy  
Office Location: Bell Hall 227  
Contact Info: Phone: (915) 747-6761  
E-mail address: [mpokojovy@utep.edu](mailto:mpokojovy@utep.edu)  
Fax # 915-747-6502 (Math Department)  
Emergency Contact: 915-747-5761 (Math Department)  
Office Hrs: MW 3:20 pm – 4:20 pm, by appointment or on a drop-in basis  
Grader: TBA  
Textbook(s), Materials: Required: Mendenhall, W., Sincich, T. (2012): *A Second Course in Statistics: Regression Analysis*, 7<sup>th</sup> ed., Pearson, Boston, MA

PC or laptop with R Studio (freeware) installed

Recommended: Access to SAS and Minitab software

Course Description and *Contents:*

Learning Outcomes: A review of statistical inference and simple linear regression will be given. An introduction to multiple linear regression and analysis of variance (ANOVA) using normality assumption for common experimental designs, residual diagnostics and remedial measures for violation of assumptions will be presented. In-depth treatment of the concepts of type-I and type-II error rates, power, hypothesis, testing, and inference will be given. Further topics will include populations and random sampling, sampling distributions and Central Limit Theorem (CLT), logistic regression, etc.

*Objectives and outcomes:*

- Learn seminal probabilistic and statistical concepts and techniques of statistical inference.
- Explore theoretical aspects and develop practical skills of (parametric) regression analysis with focus on linear regression.
- Learn common models and procedures of ANOVA.
- Get introduced to seminal concepts of statistical hypothesis testing,

etc.

Course Activities/Assignments: In addition to the core lecture and computer demonstrations, homework and project assignments will be given. It is expected that you spend an absolute minimum of 4 hours a week outside of class on solving homework problems and/or working on the projects, reviewing your class notes, etc. There will be two midterm and one final exam during and at the end of the semester.

Assessment of Course Objectives: *Homework and project:* At least one homework will be given every 1-2 weeks. There will also be a project assigned. NO collaboration among students (on homework assignments and/or the project) is allowed. If you have questions, ask the instructor, not other students. NO late submissions will be accepted.

*Midterm exams:* There will be two noncumulative midterm exams.

*Final Exam:* There will be a comprehensive final exam.

One or two double-sided 8.5"×11" sheets of handwritten notes will be allowed on the midterm exams and the final exam, respectively. Additionally, an offline scientific calculator will be needed (but cannot be shared) during the exams.

Course Schedule:

- Course duration: 1/17/2018 – 5/02/2018
- Spring Census Day: 1/31/2018
- Spring Break: 3/12/2018 – 3/16/2018
- Course drop/withdrawal deadline: 03/29/2018 (No "W" will be assigned for dropping the course after the deadline!)
- Midterm 1: 3/5/2018
- Midterm 2: 4/9/2018
- Project submission deadline: TBA
- Final exam: 5/7/2018 at 4:00 pm – 6:45 pm

Grading Policy: *Homework:* 20%  
*Midterm 1:* 20%  
*Midterm 2:* 20%  
*Project:* 20%  
*Final exam:* 20%

The usual grading scale will be used for this course (90–100% = A, 80–89% = B, 70–79% = C, 60–69% = D, 0–59% = F). Academic performance in this class will be the only factor used in determining the course grade. No extra credit work will be available to improve on any grade.

Make-up Policy: There will be no make-up homework or tests/exams.

Disclaimer: This syllabus is subject to possible changes/amendments if errors/typos are discovered or changes/amendments are deemed necessary by the instructor.

**Attendance Policy:** It is both required and highly recommended that you attend every class. If you miss a class, you will miss a lot of information. If you are unable to attend, you are still responsible for the material covered. Ask any of your classmates for their notes since the examples discussed in class may be used in the tests later. If you try to go from one class to another without studying, you will very likely be completely lost during the next class. More than 5 unexcused absences will result in an instructor-initiated drop or final grade reduction. Being late by 15 minutes or more or leaving the classroom before the class is dismissed will be considered an absence.

Students are generally expected to arrive on time and remain in the class for the entire period. It is essential to pay attention in class and take legible notes. It is also important to read the textbook and work through the example problems given in the textbook and the class. Failure to accomplish the above – as a minimum – will almost invariably ensure a less than satisfactory grade for this course.

**Academic Integrity Policy:** The University policy is that all suspected cases or acts of alleged scholastic dishonesty must be referred to the Dean of Students for investigation and appropriate disposition. Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to cheating, plagiarism, collusion, 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 or the attempt to commit such acts. Each student is responsible for notice of and compliance with the provisions of the Regents'

Rules and Regulations, which are available for inspection electronically at

<http://www.utsystem.edu/bor/rules/homepage.htm>

All students are expected and required to obey the law, to comply with the Regents' Rules and Regulations, with System and University rules, with directives issued by an administrative official in the course of his or her authorized duties, and to observe standards of conduct appropriate for the University. A student who enrolls at the University is charged with the obligation to conduct himself/herself in a manner compatible with the University's function as an educational institution.

Any student who engages in conduct that is prohibited by Regents' Rules and Regulations, U. T. System or University rules, specific instructions issued by an administrative official or by federal, state, or local laws is subject to discipline, whether such conduct takes place on or off campus or whether civil or criminal penalties are also imposed for such conduct.

**Civility Statement:** 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 a student has or suspects she/he has a disability and needs an accommodation, he/she should contact The Center for Accommodations and Support services (CASS) at 747-5148 or at [cass@utep.edu](mailto:cass@utep.edu) or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any CASS accommodation letters and instructions.

**Military Statement:** If you are a military student with the potential of being called to military service and/or training during the semester, please contact me by the end of the first week of class