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

Course #:
STAT 4385
(CRN 18368)

Course Title:
Applied Regression Analysis

Credit Hrs:
3

Term:
Fall 2021 (Instruction 08/23/2021 – 12/02/2021)

Course Meetings & Location:
College of Business Admin 304
1:30-2:50pm TR

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]
xsu@utep.edu
Fax: (915) 744-6502

Office Hours:
10:00 am – 12:00 noon Wed

Class Web page:
Blackboard

Textbook(s), Materials:
Pearson.


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:
- 09/06 Labor Day
- 10/29 Course Drop Date
- 11/25 - 11/26 Thanksgiving
- 12/06 - 12/10 Final Exam Week

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.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Date and Time</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm Exam I</td>
<td>TBA</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm Exam II</td>
<td>TBA</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm Exam III</td>
<td>TBA</td>
<td>20%</td>
</tr>
<tr>
<td>Homework &amp; Projects</td>
<td>See class website</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>TBA</td>
<td>25%</td>
</tr>
</tbody>
</table>

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. Besides, graduate students will be given extra work for this course to be counted as graduate credits.

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, 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.

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/withdraw 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.