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

Course #: STAT 4385
Course Title: Applied Regression Analysis
Credit Hrs: 3
Term: FALL 2016
Course Meetings & Location: TBA
Prerequisite Courses: Minimum Grade of C on STAT 2480 or 3330 or 3320.
Instructor: TBA
Office Location: Bell Hall 320
Contact Info: Phone:
Office Hours:
Class Web page:
Textbook(s), Materials: Required: Practical Regression Analysis
By Faraway, 2002 (open-source text – to be provided)
Suggested: Special reprint of Applied Linear Statistical Models, 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
activities, 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, time series and
forecasting. 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. Time series models
8. Forecasting and application of time series models

Course Activities/Assignments:
In–class activities and discussion will be the primary means of instruction.
Students are expected to attend class and points will be deducted for every
absence unless it is excused due to a medical condition, family emergency or
professional/educational activities. A semester long project will be completed
with a community partner and class presentations and possibly visitations to
the research site may be required. Two exams will be held and regular
homework assignments will be required. No late assignments will be accepted
except for excused reasons. Please contact the instructor immediately if you
need to miss a class or cannot turn in an assignment.
Course Schedule: TBA
Final Exam Schedule: TBA
Make-up Policy: All other assignments must be turned in on time.
Grading Policy: There will be a few of computer project assignments and a final project. The computer assignments make up 10% and the final project makes up 25% of your grade. For the final project, you will be working on a project with a community organization. There will be detailed information given about this project during the first week of classes. There will also be a few in-class quizzes, which make up 10%, and regular in-class assignments which are worth 5%. One midterm exam is worth 20% and a comprehensive final is worth 25% of your final grade. The remaining 5% of the grade will be a participation grade that will be rigorously assessed by the instructor. More details to come in class about what is expected to earn all points for the participation grade. No make-up exam will be given and no late project submission is accepted without justifiable reasons.

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. Please notify the instructor if you need to miss due to illness, an emergency or for attending an academic event. Otherwise, you are expected to attend.

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.

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.