Course #:	STAT4385(19033)
Course Title:	Applied Regression Analysis
Credit Hrs:	3
Term:	Fall 2022
Course Meetings & Location:	TR 1:30 pm - 2:50 pm, BUSN 321
	Aug 22, 2022 – Dec.01, 2022
Prerequisite Courses:	Minimum Grade of C on STAT 2480 or 3330 or 3320.
Instructor:	Francis Biney
Office Hours:	TR 12:00pm to 1:00pm via Zoom (I will send Link)
Class Web page:	Black Board
Textbook(s), Materials:	Required:

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

Linear Models in R 2nd Edition, Faraway, J. 2015

An Introduction to Statistical Learning with R application 2nd By J. Gareth,Witten,Hastie,Tibshirana

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, 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: Logistic Regression, one/two-way ANOVA, interaction, polynomial models.
7. Time series models (if time allow)
8. Forecasting and application of time series models (if time allow)

Course Activities/Assignments:
The course will be taught with in-class instructions. Homework and computer project will be assigned throughout the semester. We will also have two midterms and a final exams. **NO LATE COURSEWORK WILL BE ACCEPTED, EXCEPT EXTREME SCENARIOS.**

Course Schedule:	August 22: Classes Begin
	September 5th: Labor Day
	September 7th: Census Day (Last day to drop without a W)
	October 28th : Drop Day (Last day to drop with a W)
	November 24 - 25th : Thanksgiving holiday
	TBA: Exams 1
	TBA: Exams 2
	TBA: Final exams
Make-up Policy:	All assignments must be turned in on time. Communicate with me if you are unable to turn something in due to an excused reason.
Grading Policy:	There will be a few of R-based computer project assignments, which make up 20% to your final score. There will also be a few Homework, which make up 20%. Two midterm exams each 15% and the final exam is comprehensive worth 30%. No make-up exam will be given and no late project submission is accepted without justifiable reasons.
	Letter grades are determined according to 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. Lecture and Lab attendance are required; more than a total of TWO unexcused absences will result in an instructor-initiated drop or final grade reduction. You are expected to check Blackboard and your UTEP miners e-mail regularly for announcements.
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.
Covid-19 Precaution	The last day to drop the course without a "W" is February 2nd. The last day to drop the course with a "W" is April 1st. Students will not be dropped by instructor. Students who decide to drop the course must process a drop form, with the Registrar's Office, before April 1st. Please note that the College of Science will remain aligned with the University and will not approve any drop requests after that date.
	Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, so that we can work on appropriate accommodations. If you have tested positive for COVID-19, you are encouraged to report your results to covidaction@utep.edu, so that the Dean

of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID 19 testing.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit epstrong.org