Course #: DS 5339
Course Title: Data Visualization
Credit Hrs: 3.0
Term: 
Course Meetings & Location: 
Prerequisite Courses: Stat 4385 and Stat 3320.
Course Fee: (if applicable) N/A
Instructor: 
Office Location: 
Contact Info: Phone #
E-mail address: 
Fax # 915-747-6502 (Math Department)
Emergency Contact: 915-747-5761 (Math Department)
Office Hrs: 

Textbook(s), Materials: Required: Selected Material from these books will be covered:
1. Claus O. Wilke, Fundamentals of Data Visualization
2. Cyrille Rossant., IPython Interactive Computing and Visualization Cookbook

Recommended: 

Course Objectives (Learning Outcomes): This course provides an introduction to the statistical application and data visualization with R and Python. The main goals of the course are to learn how to use tools for cleaning, exploring, analyzing, and visualizing data; making data-driven inferences and decisions; and effectively communicating results. At the end of the course, a student should be able to (1) clean and reshape messy datasets, (2) use exploratory tools such as clustering and visualization tools to explore data, (3) make well informed decisions about data visualization approaches, (4) incorporate design principles into the data visualizations, (5) explore various uses and functions of data visualizations, (6) and effectively communicate results using visualizations.

Course Activities/Assignments: This course will make use of quizzes and projects. This is a project-based course and students will develop a data visualization portfolio as the major final product of the course. This portfolio can be used to highlight best work over the semester.

Assessment of Course Objectives: Exams: Two midterm projects and one final comprehensive final project
Course Schedule and topics: This course includes the following topics: (1) Introduction to data analysis tools in R and Python (2) Basic Data Viz concepts and types (3) Pitfalls of data visualizations, (4) Using visualizations to describe statistical concepts, and (5) specialized visualizations. A main component of the course will be learning how to use R and python-based programming tools to apply the above methods to real life data sets.
Grading Policy: The usual standard grading scale will be used (90-100% = A, 80-89% = B, 70-79% = C, etc.).
Make-up Policy: Make-up exams will be given only in extraordinary circumstances, which must be documented as early as possible. No late homework accepted. **There is no makeup final exam.**
Attendance Policy: It is the student’s responsibility to attend every class, if you miss a class, you will miss a lot of information. If you try to go from one class to another without studying, you will most likely be completely lost during the next class. Students are expected to arrive for class on time and to remain for the class entire period. It is essential to pay attention in class and take legible notes. It is essential to read the textbook and work through the example problems given in the book and class. Failure to accomplish the above, as a minimum almost invariably ensures 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> 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.