San José State University (Fall /2019)
Economics 2C, *Statistics Lab*, Section 1, FA 19

Instructor/Email*:	Justin Rietz / justin.rietz@sjsu.edu
Office Hours* / Location:	by appointment
Lecture Room/ Lab Room	NA -- This is an online class with no physical meeting location
Prerequisites:	STAT 95 or other three-unit intro statistics class

*Email is my preferred form of communication. Also, during final exam week, office hours are by appointment only.

Faculty Web Page, Canvas and Communication Issues

Canvas is the Learning Management System at SJSU. Please be sure you can log in and are receiving my announcements. Although I will be communicating with the class through Canvas, if you have an individual question for me, please email me directly. For info on accessing Canvas visit https://sjsu.instructure.com.

Course Description

This course is designed to complement and add to a three-unit, traditional statistics class. All economics students require a solid foundation in statistics. In this course, students will use actual data and statistical software to conduct original statistical analysis. The class will not meet physically and all assignments and announcements will be through Canvas. Please pay close attention to announcements and deadlines.

Course and Program Learning Objectives (CLOs and PLOs)

This course emphasizes three PLOs: *research methods* (ECON PLO3), *quantitative methods* (PLO4d), and *communication* (PLO5). Five specific Course Learning Objectives for ECON 2:

CLO 1.) Explain core methods in statistics and identify correct procedures. CLO 2.) Access data & use computer software to carry out statistical tests. CLO 3.) Interpret statistical tests estimated with computer software. CLO 4.) format data to be read by regression software, and develop, estimate and interpret an original statistical test to shed light on a problem of social importance. CLOs 1, 2 and 3 will be assessed with weekly lab assignments, and CLO 4 by a term paper.

Required Textbook Resources

1.) Angrist, J. D. and Pischke, J. 2014. *Mastering Metrics,* Princeton University Press, Princeton, NJ.
2.) Sundstrom, William A. and Michael J. Kevane. *Guide to R: Data analysis for Economics.*

All resources required for this class are free, as you will only need Chapter 1 of the Angrist and Pischke book (you can download it for free at the following link, though you should buy this book if you plan to take further stats-related courses: http://press.princeton.edu/titles/10363.html) and the Sundstrom and Kevane book is also available as a free PDF document (at http://rpubs.com/wsundstrom/home) It answers all of the typical R questions students have.

Required Computer Software

All students should have installed on their personal machines 1.) A spreadsheet program, such as MS Excel, and 2.) The R statistical software package. Along with R, we will use the R Studio interface; read the first chapter of the *Guide to R* by Sundstrom and Kevane for information on downloading these free software programs.

Assignments and Grading

Passing this class requires earning at least 70% of the total possible points.

Biweekly Lab Assignments (Quizzes)

The Biweekly Assignments points are relatively easy to earn if you submit them by the deadline. *Late assignments will not be accepted.* You will be given two attempts at each question. Descriptions for weekly assignments are found on Canvas. Answers, when available, will be provided on Canvas. Please review areas where you are not getting the correct answers or with which you are struggling; as this is an online course, students must be self-directed in identifying and remedying deficiencies in their understanding.

This class is roughly divided in two portions. In the first eight weeks, students will read the first 50 pages of *Mastering Metrics*. This chapter, and especially the Appendix, contains a thorough yet concise review of important statistical concepts students learn in basic statistics courses. To ensure active reading, students will be required to submit weekly summaries of the readings, as well as specific answers to some questions based on the readings. You will also complete the first R and R Studio assignment (which covers installation and running of programs.)

After we have read MM Ch 1, Lab Assignments will focus more on problems. A major focus will be on understanding and carrying out the "difference in means" test.

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/"