Instructor: Dr. David Vera.

Contact Info: Peters: 385B. Phone: 278-4935

Email: dvera@csufresno.edu. Write ECON 123 in the subject line*

Office Hours: Tuesday: 2:00pm to 3:00pm   &   Thursday: 2:00pm to 3:00pm.

Textbook: "Real Econometrics" by M. Bailey, Oxford University Press, 2017.
http://www.facultybookshelf.org/course/13812

Class website   Data, problem sets and other material will be posted on Blackboard.

Prerequisites: ECON 40, ECON 50 and MATH 11 or MATH 101 or DS 73 or PSYCH 42 passed with C grade. Introductory courses are necessary in order to follow the lectures satisfactorily. Students who have not completed these courses **MUST** consult with the instructor.

Notice: This syllabus and schedule are subject to change in the event of extenuating circumstances. If you are absent from class, it is your responsibility to check on announcements made while you were away. I reserve the right to change the syllabus. If you are absent from class, it is your responsibility to check on announcements made while you were away.

Course Description: This course will introduce students to the basic principles of statistical data analysis in economics. Students will learn how economic data are used with economic and statistical models as a basis for estimating key economic parameters, testing economic hypotheses and predicting economic outcomes.

Student Learning Outcomes:

- To evaluate and explain economic concepts by applying econometric tools using an open source econometric software.

- To apply basic econometric theory as a tool to understand, measure and evaluate economic phenomena.

- To apply elementary statistics and regression analysis in the study and solution of economic problems.

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*You can contact me directly through Blackboard. You can access Blackboard by going to
http://www.fresnostate.edu/academics/blackboard/

- To become proficient in basic econometric analysis that is transparent and reproducible.

Word of Warning

ECON 123 requires you to do a lot more work outside of class than you are probably used to. Therefore, expect to devote a fair amount of time outside of class (at least six hours per week) to study and to complete assignments. Do not wait until you have fallen behind to talk to me or to see me during office hours; if you have questions on the material or homework come to office hours or ask me at the end of the session. The way to succeed in this class is to stay ahead of the curve. It may take you more than one read to digest the material from a given chapter so read often and use a highlighter. Consider joining/starting a study group to work on homework and prepare for the exams. Study groups can also help you bounce off ideas for your own research.

Class format

The course will be in the form of lectures delivered by the instructor along with class discussions. Also, computer laboratory sessions are associated with this course. The laboratory sessions will consist of complementary instruction, computing tips necessary to complete assignments as well as topics that may not be covered during regular class hours. The open source statistical package **R** will be utilized by the student throughout the course. The instructor will teach students the basic steps to use this statistical package during lab sessions and all the necessary code will be provided in class. You will be using R to complete class homework as well as in your own research project. **R** is available in all the workstations in the computer lab (PB 133-135). **R** is an open-source software so you can also install it on your own laptop.

Students are expected to: (1) be on time to attend each class and each computer laboratory session, (2) actively participate in class discussions by reading material ahead of time, (3) behave appropriately in class (not reading the newspaper, texting, sleeping, coming in late or leaving early, or in any other way disturbing the instructor or other students in the classroom), (4) behave with honesty and integrity.

Practice Problems, Exams and Grading:

1. **Course Requirements**

    (a) Problem sets (10%)

    (b) Quizzes (10%)

    (c) Midterm Exam: Week #9 of the semester (30%)

    (d) Research Project (20%)

    (e) Cumulative Final: Thursday, December 20th, 8:45 a.m - 10:45 a.m. (30%)

2. **Problem sets**. You **must** submit your own answers to these problem sets. You may work on the assignment with other students, but you must turn in your own individual answer. **Your answer can not be copied from another student.** The problem sets are designed to help you prepare for the exams and provide practical applications of econometrics. Stop by during my office hours if you have questions about the problem sets. You will submit your answers through Blackboard. **Late homework will be heavily penalized.**

3. There will be a quiz for each new chapter to be covered in class. The first quiz will be in week #2. Reading the chapter beforehand can help your understanding of the material. The quizzes are meant to check that you have done the reading before class. I will throw out the quiz with the lowest grade.[†]

4. The Midterm Exam and Cumulative Final must be taken at the scheduled time and place; they will not be given at a different date.

5. No make-up exams will be given in this class. Students who miss the midterm exam without a university accepted excuse will receive a grade of **zero (0)** for the exam. Students who miss the midterm with a university accepted excuse will have the weight of the final exam increased accordingly (final exam will be worth 60%).

   Excuses for missed exams must be *pre-approved* by the instructor (except when this is not possible in an emergency situation). Students who make initial contact *after* the exam will have to document why they could not make contact prior to the exam. In addition, any student who misses an exam due to physical illness will be required to provide documentation from a health care professional indicating why the student was physically unable to take the exam. All documentation and an additional signed written statement explaining the relevant circumstances of the absence must be provided to the instructor within two working days of the student return to campus. Failure to comply with any of the above in the specified manner will result in a grade of **zero (0)** for the exam. Do not miss the midterm thinking that you will be exempt from this rule.

6. **Research Project:** The project consists of designing, estimating, and analyzing regression model(s). This is an individual project. You will be using **R** for estimating your model(s). The goal is to produced a research project that is transparent and reproducible. The electronic submission of your final project should include the following components:

   (a) A <u>10 page</u> paper (not including the appendix). The format is double-space and font size 12. The paper must be written in a proper form, containing appropriate citations, using standard English grammar and correct spelling. APA format is acceptable.

   (b) An appendix containing all tables with descriptives, results and graphs should be included at the end of the paper.

   (c) Data used in the project, so that your results can be verified.

   (d) R script used to produce your results. Your R script will be commented out so that it will be easily reproducible.

   (e) You will upload your paper, raw data and R script to Blackboard.

   (f) Here is a projected time line (I will give specific instructions for each of the items below as the semester progresses):

   - Possible Topics & data ideas. Due: Week 8 (10 points).
   - Project proposal & Outline. Due: Week 10 (10 points).
   - Data Report. Due: Week 12 (15 points).
   - Rough Draft. Due: Week 14 (15 points).
   - Final Project. Due: Week 16 (Blackboard submission, 50 points).

[†]This also means that you can miss a quiz without any penalty.

7. **Grading:** The following breakdown represents the most conservative scale to determine final course grades. However, I reserve the right to apply a curve, depending on the final point distribution.

   A: 90%

   B: 80% to 89%

   C: 70% to 79%

   D: 60% to 69%

   F: below 60%

8. **Plagiarism Detection:** The campus subscribes to Turnitin and the SafeAssign plagiarism prevention service through Blackboard, and you will need to submit written assignments to Turnitin/SafeAssign. Student work will be used for plagiarism detection and for no other purpose. The student may indicate in writing to the instructor that he/she refuses to participate in the plagiarism detection process, in which case the instructor can use other electronic means to verify the originality of their work. Turnitin/SafeAssign Originality Reports will not be available for your viewing.

UNIVERSITY POLICIES AND SERVICES

1. **Students with Disabilities:** Upon identifying themselves to the instructor and the university, students with disabilities will receive reasonable accommodation for learning and evaluation. For more information, contact Services to Students with Disabilities in the Henry Madden Library, Room 1202 (278-2811).

2. **Honor Code:** "Members of the CSU Fresno academic community adhere to principles of academic integrity and mutual respect while engaged in university work and related activities." You should:

   (a) understand or seek clarification about expectations for academic integrity in this course (including no cheating, plagiarism and inappropriate collaboration)

   (b) neither give nor receive unauthorized aid on examinations or other course work that is used by the instructor as the basis of grading.

   (c) take responsibility to monitor academic dishonesty in any form and to report it to the instructor or other appropriate official for action. Instructors may require students to sign a statement at the end of all exams and assignments that "I have done my own work and have neither given nor received unauthorized assistance on this work."

3. **Cheating and Plagiarism:** "Cheating is the actual or attempted practice of fraudulent or deceptive acts for the purpose of improving one's grade or obtaining course credit; such acts also include assisting another student to do so. Typically, such acts occur in relation to examinations. However, it is the intent of this definition that the term 'cheating' not be limited to examination situations only, but that it include any and all actions by a student

that are intended to gain an unearned academic advantage by fraudulent or deceptive means. Plagiarism is a specific form of cheating which consists of the misuse of the published and/or unpublished works of others by misrepresenting the material (i.e., their intellectual property) so used as one's own work." Penalties for cheating and plagiarism range from a 0 or F on a particular assignment, through an F for the course, to expulsion from the university. For more information on the University's policy regarding cheating and plagiarism, refer to the Class Schedule (Legal Notices on Cheating and Plagiarism) or the University Catalog (Policies and Regulations).

4. **Computers:** "At California State University, Fresno, computers and communications links to remote resources are recognized as being integral to the education and research experience. Every student is required to have his/her own computer or have other personal access to a workstation (including a modem and a printer) with all the recommended software. The minimum and recommended standards for the workstations and software, which may vary by academic major, are updated periodically and are available from Information Technology Services (http://www.fresnostate.edu/technology) or the University Bookstore (http://www.kennelbookstore.com). In the curriculum and class assignments, students are presumed to have 24-hour access to a computer workstation and the necessary communication links to the University's information resources." The Craig School Business student computer lab is located in PB 133-135.

5. **Disruptive Classroom Behavior:** "The classroom is a special environment in which students and faculty come together to promote learning and growth. It is essential to this learning environment that respect for the rights of others seeking to learn, respect for the professionalism of the instructor, and the general goals of academic freedom are maintained. ... Differences of viewpoint or concerns should be expressed in terms which are supportive of the learning process, creating an environment in which students and faculty may learn to reason with clarity and compassion, to share of themselves without losing their identities, and to develop and understanding of the community in which they live . . . Student conduct which disrupts the learning process shall not be tolerated and may lead to disciplinary action and/or removal from class."

6. **Copyright Policy:** Copyright laws and fair use policies protect the rights of those who have produced the material. The copy in this course has been provided for private study, scholarship, or research. Other uses may require permission from the copyright holder. The user of this work is responsible for adhering to copyright law of the U.S. (Title 17, U.S. Code). To help you familiarize yourself with copyright and fair use policies, the University encourages you to visit its Copyright Web Page (https://library.fresnostate.edu/info/copyright-policy).
Blackboard course web sites contain material protected by copyrights held by the instructor, other individuals or institutions. Such material is used for educational purposes in accord with copyright law and/or with permission given by the owners of the original material. You may download one copy of the materials on any single computer for non-commercial, personal, or educational purposes only, provided that you (1) do not modify it, (2) use it only for the duration of this course, and (3) include both this notice and any copyright notice originally included with the material. Beyond this use, no material from the course web site may be copied, reproduced, re-published, uploaded, posted, transmitted, or distributed in any way without the permission of the original copyright holder. The instructor assumes no

responsibility for individuals who improperly use copyrighted material placed on the web site.

7. Our campus has developed SupportNet (http://fresnostate.edu/studentaffairs/lrc/supportnet) to connect students with specific campus resources promoting academic success. These resources although not specific to ECON123, can still help you succeed in the course. Make sure to take advantage of SupportNet.

8. **STUDENT HANDBOOK** Information on student rights, responsibilities, academic honesty, etc., can be found on the Fresno State Student Handbook web page. The web page is located at: http://www.fresnostate.edu/studentaffairs/division/general/studenthandbook/.

Econometrics Schedule Fall 2018 (weekly)

Week	Week Of	Topic
1	8/20/18	Syllabus. Chapter 1: The Quest for Causality.
2	8/27/18	Chapter 1, Chapter 2: Stats in the Wild: Good Data Practices.
3	9/3/18	Chapter 3: Bivariate OLS
4	9/10/18	Chapter 3: Bivariate OLS. Chapter 4: Hypothesis Testing
5	9/17/18	Chapter 4: Hypothesis Testing
6	9/24/18	Chapter 5: Multivariate OLS
7	10/1/18	Chapter 5: Multivariate OLS
8	10/8/18	Chapter 6: Dummy Variables
9	10/15/18	Chapter 6: Dummy Variables
10	10/22/18	Chapter 7: Transforming variables
11	10/29/18	Chapter 7: Transforming variables
12	11/5/18	Chapter 8: Panel Data
13	11/12/18	Chapter 8: Panel Data
14	11/19/18	Chapter 9: Instrumental variables/ Thanksgiving break
15	11/26/18	Chapter 9: Instrumental variables/
16	12/3/18	Chapter 10: Experiments
17	12/10/18	Chapter 11: Regression discontinuity. Review

Notes
Midterm: During week 9
Thanks Giving Break: November 21, 22, 23
Final Paper: Due on last day of class (12/11/2018)
Final Exam: Thursday December 20, 08:45am-10:45am