

**San José State University
Economics Department**

Econ 203A Economic Research Methods Fall 2021

Course and Contact Information

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| Instructor: | Dr. Paul Lombardi |
| Office Location: | DMH 131 |
| Telephone: | (408) 924-5404 |
| Email: | paul.lombardi@sjsu.edu |
| Office Hours: | Wednesday 5:30-6:30 pm and by appointment (including through Zoom) |
| Class Days/Time: | Hybrid: In-person portion on Wednesdays 6:30-9:15pm |
| Classroom: | DMH 231 |
| Prerequisites: | Intermediate Microeconomic Theory (Econ 101) and Elementary Statistics (Econ 3) |

Class Resources

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on Canvas Learning Management System course login website at <http://sjsu.instructure.com>.

Course Description

Illustrate how to construct an economic study. Topics include statistical methods, cost-benefit analysis, data analysis, other quantitative techniques, literature reviews, and the professional standards of the discipline.

Course Learning Outcomes (CLO)

Upon successful completion of this course, students will be able to:

1. Explain basic methods in economic statistics and identify correct procedures
2. Prepare a scholarly research paper describing a regression analysis
 - a. Formulate an interesting and important research question
 - b. Locate usable data from Internet or other sources
 - c. Search and analyze scholarly literature related to research question
 - d. Write a literature review
 - e. Develop a statistical model that can be used with the data to answer a question which contributes to the literature

Required Texts/Readings

Textbook (Required)

1. Stock, James H. and Mark W. Watson. *Introduction to Econometrics*. (Boston: Pearson. 2011). Either the 2nd or 3rd editions are appropriate for the course. You will likely be using the same textbook in 203B.

2. Angrist, Joshua and Jorn-Steffen Pischke. *Mastering Metrics*. (New Jersey: Princeton University Press, 2015). A pdf version can be found on the class' Canvas website.
3. Sundstrom, William A. and Michael J. Kevane. *Guide to R: Data Analysis for Economics*. 2017. A pdf version can be found on the class' Canvas website.

I will assign supplementary readings through the course's Canvas website, JSTOR, or the MLK Library.

Software (Required)

1. A Spreadsheet program (preferably MS Excel)
2. A statistical software package. You have two options:
 - a. R and R Studio: See Sundstrom and Kevane (2017) for details
 - b. Stata: Purchased through www.stata.com

Course Requirements and Assignments

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in University Policy S12-3 at <http://www.sjsu.edu/senate/docs/S12-3.pdf>.

- There are four components to your grade: two exams (20%), discussion boards/zoom meetings (15%), term paper (45%), and homework assignments (20%).
- The exams will have short answer questions. Both exams are worth 10% of your final grade. The exams are open book open note. You will be required to upload your answers to our Canvas as pdf files.
- Students will be assigned one to two discussion boards per week during the semester. Additionally, students will have several five to ten-minute meetings during the semester. The meetings will one on one with the professor. The intention of the meetings is to check on student progress and provide an opportunity to clarify challenging concepts.
- Students will be writing a term paper. The paper will be split into several assignments: an outline, rough draft, two presentations, final draft, and code log. For due dates, please see the Due Date Schedule. The paper grade is out of 45 points (i.e., 5 outline, 5 first presentation, 5 rough draft, 7 second presentation, 3 code log, 20 final draft).
- There will be about four homework assignments throughout the semester.

Grading Information

Corresponding letter grades will be assigned as follows:

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|------------|-----------|-----------|-----------|---------|
| 97-100% A+ | 87-89% B+ | 77-79% C+ | 67-69% D+ | |
| 93-96% A | 83-86% B | 73-76% C | 63-66% D | |
| 90-92% A- | 80-82% B- | 70-72% C- | 60-62% D- | 59-0% F |

Assignments submitted one week late will have a grade deduction of 30 percent. No credit is provided for any later submissions.

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](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester's Catalog Policies section at <http://info.sjsu.edu/static/catalog/policies.html>. Add/drop deadlines can be found on the current academic calendar web page at http://www.sjsu.edu/provost/Academic_Calendars/. The Late Drop Policy is available at <http://www.sjsu.edu/aars/policies/latedrops/policy/>. Students should be aware of the current deadlines and penalties for dropping classes. Information about the latest changes and news is available at the Advising Hub at <http://www.sjsu.edu/advising/>.

Consent for Recording of Class and Public Sharing of Instructor Material

University Policy S12-7, <http://www.sjsu.edu/senate/docs/S12-7.pdf>, requires students to obtain instructor's permission to record the course. "Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor's permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material." "Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent."

Academic Integrity

Your commitment as a student to learning is evidenced by your enrollment at San Jose State University. The University's Academic Integrity policy, located at <http://www.sjsu.edu/senate/S07-2.htm>, requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The Student Conduct and Ethical Development website is available at http://www.sa.sjsu.edu/judicial_affairs/index.html. Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include your assignment or any material you have submitted, or plan to submit for another class, please note that SJSU's Academic Policy S07-2 requires approval of instructors.

Campus Policy in Compliance with the American Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf requires that students with disabilities requesting accommodations must register with the Accessible Education Center (AEC) at <http://www.sjsu.edu/aec> to establish a record of their disability

Economic Research Methods, Econ 203A, Fall 2021 Course Schedule

The following schedule is subject to change. If changes are needed, I will make announcements in class and through Canvas.

Exam and Due Date Schedule

| Week | Date | Holidays, Assignments, and Exams |
|------|----------|--|
| 6 | 10/3/20 | Exam 1 |
| 8 | 10/17/20 | Outline |
| 9 | 10/24/20 | Presentation of paper from Literature Review |
| 13 | 11/21/20 | Rough Draft |
| 14 | 11/28/20 | Final Presentations |
| 16 | 12/12/20 | Final Draft, Code Log, and Exam 2 |

Subject Schedule

We will spend a week or two on each of the following topics. Some subjects maybe skipped depending on time constraints. Changes will be announced in class and through Canvas.

- Intro/ Statistics (SW Ch1-3 and AP Ch1)
- Literature Review and Policy Analysis (SJSU Library and Krueger 2003)
- Intro to Regression Analysis and Linear Probability Models (SH Ch4 & 5 and Section 11.1)
- Regression Theory (SW Appendix 4.1-4.3 and 5.1-5.2)
- Multiple Regression (SW Ch6-7 and AP Ch2)
- Nonlinear Regression Models (SW Ch8)
- Critical Assessment: Regression Models and Econometrics Pedagogy (SW Ch9)

Term Paper Instructions¹

You will write a term paper that replicates and extends a previously published article. A list of replication candidates based on the American Community Survey (ACS) is available course file section. We will cover accessing the ACS data in class. If you do not find a paper to your interests on the list, you are free look for other economics paper using micro level data from a major publically available dataset (i.e., ACS, historical US Censuses, and National Longitudinal Study of Youth). Be sure the paper does not use a combination of public and private. All papers outside of the Candidates List will need professor approval.

By September 26th, students need to provide me a copy of the paper they intend to replicate and a list of data sources used in the paper. On October 17th, you will write up an outline that contains your project's title, five sections with section names, a one sentence research question, and a detailed data reference. In your outline, list ten studies you plan to review in the Literature Review section. In addition, include the regression equation (with variable names) you're replicating (indexing variables to make it clear what is the unit of observation), and an idea for extending the model. On October 24th, you will present the paper from your list of ten that provides the best estimate of the causal effect and explain why the paper was superior. The rough draft is due 11/21/21. Final presentations will occur during week thirteen. The final draft and code log are due on 12/12/21.

¹ This section borrows heavily from Professor Holian's Fall 2018 Econ 203A syllabus.

All papers must have five sections: Introduction, Literature Review & Economic Theory, Description of Data, Empirical Results, and Conclusion. Sections will be about five paragraphs in length and each paragraph about five sentences. This “5X5” suggestion is a rule-of-thumb and need not be followed exactly. However, papers must have these three tables: Variable Descriptions, Summary Statistics, and Regression Results. Original figures are encouraged; copied figures are prohibited. Tables must be formatted exactly as described in class and References (in a Bibliography section) must be in APA format. Finally, all papers must write out at least one equation describing an empirical model in appropriate notation.

| Criteria | Description of Criteria for Rough Drafts and Term Papers |
|------------------------------|---|
| <i>Organization</i> (15%) | Is the Research Question clearly stated? Are there five sections? Are sections given correct titles? Does content of a section match its title? Is there a title and abstract? References? |
| <i>Grammar</i> (15%) | Does each paragraph have a topic sentence? Do all sentences develop one controlling idea? Does paper use appropriate grammar (punctuation, syntax, usage)? Is the paper free of spelling errors? Are citations used appropriately? |
| <i>Style</i> (15%) | Does paper avoid the passive voice? Does paper avoid use of the word "stated"? Does paper avoid split infinitives? Overall, is the writing style and voice appropriate? Does it appear the student read contemporary and seminal studies and is it written in the style of the profession? Does it appear the student read Langlois' notes on writing? http://web.uconn.edu/langlois/writing/style.html * |
| <i>Content I</i> (25%) | The replication - The student must obtain data, and successfully estimate at least one econometric model that was published in a scholarly book or journal. Present the results in an easy to read format, and highlight whether the replication was successful or not, and the strengths and weaknesses of the replicability of the model. |
| <i>Content II</i> (30%) | The extension - A specific causal research question must relate to a relevant economics literature and the data must be used to shed light on the question. The literature review must be integrated and not merely an annotated bibliography, and it must discuss ways the state-of-the art studies handle well-defined econometric problems (such as OVB) and suggest directions for future research. The conclusion must give at least a serious nod to policy analysis. |

*For more on style, students should also consult Strunk, William. *The elements of style*. Penguin, 2007. *Economical Writing* by Deirdre McCloskey (1999) is also highly recommended. However the best way to learn the style of economic writing is to read economic writing; which suggests you should try to actually read the journal articles and book chapters you review in your literature review section, not just the abstracts.