

**San José State University  
Economics Department**

**Econ 203A Economic Research Methods Fall 2022**

**Course and Contact Information**

Instructor:	Dr. Paul Lombardi
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Office Hours:	Tuesdays 2:00-4:00 pm or by appointment
Class Days/Time:	Tuesdays 6:00-8:45pm
Classroom:	DMH 166
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 2<sup>nd</sup> or 3<sup>rd</sup> 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](http://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%), activities (i.e., quizzes and discussions) (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 participate in several discussions and short quizzes; These activities are in addition to two five to ten-minute meetings. The meetings will be 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/peer review, 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:

97 to 100% A plus	87 to 89% B plus	77 to 79% C plus	67 to 69% D plus	
93 to 96% A	83 to 86% B	73 to 76% C	63 to 66% D	
90 to 92% A minus	80 to 82% B minus	70 to 72% C minus	60 to 62% D minus	59 to 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/](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](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](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 2022 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	9/27/22	Exam 1
8	10/16/22	Outline
9	10/18/22	Presentation of paper from Literature Review
13	11/20/22	Rough Draft
14	11/22/22	No class due to Thanksgiving
15	11/29/22	Final Presentations
16+	12/13/22	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 Instructions<sup>1</sup>

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.

All students must read Stock and Watson's chapter titled, "Conducting a Regression Study Using Economic Data." By 10/16/22, you will choose a topic, collect data, and write up an outline that contains your project's title, five sections with section names, a one-sentence research question, detailed data references, the regression equation you plan on estimating (indexing variables to make it clear what is the unit of observation)

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

and a citation to a closely related publication. The rough draft is due on 11/20/22, and the final paper and code log are due on 12/13/22.

All papers must have five sections (plus a References section) with the following titles: Introduction, Literature Review & Economic Theory, Description of Data, Empirical Results, Conclusion. Sections will be about five paragraphs in length, and each paragraph about five sentences. 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 as described in class. All papers must also write out an equation describing the empirical model. Holian (2014) closely follows this format.

As a set of minimal standards for regression models, all papers should report more than one model specification in Table 3 (the Regression Results table.) One of these specifications should contain at least three distinct variables (e.g., a polynomial specification of one variable does not count as more than one), and one of the variables must be continuous. You should also estimate at least one nonlinear model, i.e., include polynomial, logarithmic, and/or interaction variables, and also attempt using at least one advanced techniques (sample weighting, panel methods, etc.) Papers must include an abstract. In the Conclusion, students must critically evaluate the models they present and discuss ways to improve them in future work.

### Rubric for evaluating Outlines

Criteria	Description of Criteria for Outlines
<i>Topic</i> 20% of the score for the assignment	Is the research question specific and does it relate to an interesting causal question in a relevant economics literature? Does it identify one or more relevant JEL codes, and reference one or more relevant publications?
<i>Data</i> 40% of the score for the assignment	Can the reader gain a clear picture of the data source and the measures contained in it? Is there a reference to a web link (if available) where a reader could access the data to be used? Does it contain a regression equation with an available dependent variable and at least one independent variable? Is the estimation subsample clearly specified?
<i>Organization</i> 20% of the score for the assignment	Does it appear the student read and understood Chapter 10 of SW (Brief Edition?) Does it appear the student read and understood the requirements for the term paper described in the syllabus?
<i>Difficulty</i> 20% of the score for the assignment	Are appropriate data and variables employed or does the choice of data or variables reflect “convenience”?