

San José State University
Social Sciences/Economics
ECON 108, Cost-Benefit Analysis, Section 1, Fall, 2020

Course and Contact Information

Instructor:	Dr. Sanchita Mukherjee
Office Location:	DMH 214
Telephone:	
Email:	sanchita.mukherjee@sjsu.edu
Office Hours:	By appointment
Class Days/Time:	Mo We 12:00PM - 1:15PM
Classroom:	Online. I will hold Zoom live lectures on Mo We 12noon-1:15pm
Zoom Lecture Link:	https://sjsu.zoom.us/j/91401911603 Meeting ID: 914 0191 1603
Prerequisites:	Econ 1B and Econ 3 or Econ 2c

Course Description (Required)

The purpose of this course is to provide you with a systematic and rigorous way of thinking about the measurement of benefits and costs when evaluating public projects, programs or regulations. Cost-benefit analysis (CBA) has wide application, including: highway construction projects, safety regulations, environmental resource use, taxation of cigarettes, and investment in higher education. Given the prevalence of cost-benefit analyses in government budgetary processes, this course will develop the critical appraisal skills needed to evaluate public reports. By the end of the course you should be able to conduct your own benefit-cost analysis on any issue of sufficient interest, as well as be able to determine whether someone else's cost-benefit analysis is well done or poorly done.

Course Learning Outcomes (CLO) (Required)

By the end of this course, students will be able 1.) to explain the reason for using CBA, its history of use in the United States and around the world, and to discuss current controversies surrounding it, 2.) to differentiate between CBA and related techniques such as Cost-Effectiveness Analysis (CEA) and Economic Impact Analysis (EIA); 3.) to describe and use the tools of applied welfare economics, relevant numerical methods (e.g., inflation adjustments, present value calculations) and statistical and data analysis methods (survey design, regression) to answer technical questions related to CBA, and 3.) to produce an appropriate recommendation concerning a policy or project, as well as to evaluate recommendations made by others. CLOs 1-3 will be assessed through in-class exams and a term paper.

Required Texts/Readings (Required)

Textbook

Cost-Benefit Analysis: Concepts and Practice by Boardman, Greenberg, Vining, and Weimer, (5th Edition), Cambridge University Press

ISBN-13: 978-1108401296

ISBN-10: 1108401295

It is available at any of the online outlets (Amazon, for example). Used copies are fine.

Other technology requirements / equipment / material

The class will use Microsoft Excel for data collection, storage and regression analysis. Use of statistical software R is recommended for regression analysis, but not required.

Course Requirements and Assignments (Required)

1) Problem Sets (40% of your grade, 10% each):

There will be 4 problem sets due, each of which will be posted on Canvas. Please submit assignments on the day they are due. Assignments handed in after answers are distributed will receive no credit.

2) Term Paper Proposal (5% of your grade) – min. 500 Words

To avoid last minute chaos, a proposal is required by **October 14, 2020**. The proposal should include:

- I. A brief description of the project
- II. Why you find this project interesting and important?
- III. How you will obtain data? Mention specific data sources from where you are going to collect data for your analysis.
- IV. Methodology you will be using to compare costs and benefits.

3) Term paper (15% of your grade)

One major goal of this course is to provide you with skills and knowledge of both the theory and the practical tools necessary to start your own research. The best way to achieve this goal is to write an original research paper.

Paper Structure:

I. Title page: Name of the Project, Group Number, Name(s) of the Author(s)

II. Abstract. This should be less than 50 words and summarize the topic, methodology, and main findings. It should appear on your title page.

III. Overview of the Project

IV. Plan Purpose

V. Monetization of Benefits

- Detailed Methodology

- Tables

- Graphs, where applicable

VI. Monetization of Costs

- Detailed Methodology

- Tables

- Graphs, where applicable

VII. CBA Findings

VI. Conclusion. Review the major findings as well as possible extensions for future work. Make sure to mention any limitations of your approach as well as alternative explanations of your results. Policy implications, if any, could also be included in this section.

VII. Tables and graphs. Your paper must include at least one table and one graph. The tables and graphs should be well-labeled and accessible to the reader.

4) Term paper Group Presentations (10% of your grade)

We will divide the class in several 4-person groups. For example, if there are 36 students enrolled in our class, then we will have 9 groups.

Each group will have 10 minutes to present their paper in front of the class virtually on Nov 30 and Dec 2.

Groups 1-5 will present on Nov 30 and Groups 6-9 will present on Dec 2.

This will give you a chance to work together with your classmates and contribute as a part of a team – which you will have to do on a job. You can share work and make the term paper and the presentation better by working together.

5) Exams (30% of your grade)

There are two online Midterm exams (20% total, 10% each) and one online comprehensive final exam (10% of your grade). All of these exams will be multiple choice problems. The exams will be held on canvas with lockdown browser. You won't need a webcam.

Grading Information (Required)

Your grade will be based upon:

Assignments	% of your grade	Due Dates
4 Problem Sets	40% total, 10% each	PS 1: Wed, 9/9 PS 2: Mon, 10/7 PS 3: Mon, 10/28 PS 4: Mon, 11/23
Midterm 1	10%	Wed, 9/30 (On Canvas with Lockdown Browser)
Midterm 2	10%	Wed, 11/4 (On Canvas with Lockdown Browser)
Group Term Paper Proposal	5%	Mon, 10/14 (Submit on Canvas)
Group Term Paper Presentation	10%	During Class Over Zoom, Nov 30 and Dec 2, 2020. Please see the course schedule below.
Group Term Paper	15%	Wed, 12/7 (Submit on Canvas)
Final Exam	10%	Wednesday, December 9, 9:45 am-12:00 noon (On Canvas with Lockdown Browser)

You will find the Final Exam schedule for Fall 2020 at:

<https://www.sjsu.edu/classes/final-exam-schedule/fall-2020.php>

There will be no makeup exams. Please make your travel plans accordingly.

Online Classroom Protocol

In consideration to your classmates and me, be on time, stay for the duration of the class and avoid any disruptive activities within the classroom (cell phones, side conversation, etc.)

University Policies (Required)

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 year calendars document on the Academic Calendars webpage at http://www.sjsu.edu/provost/services/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.”
 - It is suggested that the green sheet include the instructor's process for granting permission, whether in writing or orally and whether for the whole semester or on a class by class basis.
 - In classes where active participation of students or guests may be on the recording, permission of those students or guests should be obtained as well.
- “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 Academic Integrity Policy S07-2 at <http://www.sjsu.edu/senate/docs/S07-2.pdf> 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.sjsu.edu/studentconduct/>.

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 Integrity 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 \(AEC\)](http://www.sjsu.edu/aec) at <http://www.sjsu.edu/aec> to establish a record of their disability.

In 2013, the Disability Resource Center changed its name to be known as the Accessible Education Center, to incorporate a philosophy of accessible education for students with disabilities. The new name change reflects the broad scope of attention and support to SJSU students with disabilities and the University's continued advocacy and commitment to increasing accessibility and inclusivity on campus.

ECON 103 / Cost Benefit Analysis, Fall 2020, Course Schedule

Course Schedule

Week 1 (8/19)

- Introduction, Syllabus, Microsoft Excel, Google Sheets
- What is Cost Benefit Analysis (CBA)?

Week 2 (8/24 and 8/26)

Topic: Introduction to CBA

- Reading: Boardman et al. Chapter 1

Week 3 and 4 (8/31, 9/2, and 9/9)

Topic: Foundations of Welfare Economics

- Boardman et al. Chapters 2 and 3
- 9/7: Labor Day, No Class
- **9/9 Problem Set 1 due**

Week 5 and 6 (9/14, 9/16, 9/21 and 9/23)

Topic: Valuing benefits and costs in efficient primary markets

- Boardman et al. Chapters 5 and 6

Week 7 (9/28, 9/30)

- 9/28: Midterm 1 Review
- **9/30 Midterm 1 (on Canvas with Lockdown Browser)**

Week 8 (10/5, 10/7)

Topics: Valuing benefits and costs in inefficient and secondary markets

- Boardman et al. Chapter 7
- **10/7: Problem Set 2 due**

Week 9, 10 and 11 (10/12, 10/14, 10/19, 10/21, 10/26 and 10/28)

Topic: Predicting and monetizing impact

- Boardman et al. Chapters 4, 8 and 14
- **10/14: Term Paper Proposal Due**
- **10/28: Problem Set 3 due**

Week 12 (11/2 and 11/4)

- 11/2: Midterm 2 Review
- **11/4: Midterm 2 (on Canvas with Lockdown Browser)**

Week 13 and 14 (11/9, 11/11, and 11/16)

Topic: Discounting

- Boardman et al. Chapters 9 and 10

Week 14 and 15 (11/18 and 11/23)

Topic: Valuing non-market goods and services

- Boardman et al. Chapter 15
- 11/25: Thanksgiving, No Class
- **11/23 Problem Set 4 due**

Week 16 (11/30 and 12/2)

- Group Presentations

Week 17 (12/7)

- Final Review
- **Term Paper Due**

Wednesday, 12/9: Final Exam

Online on Canvas with Lockdown Browser, 9:45 am – 12 noon

Week	Date	Topics, Readings, Assignments, Deadlines
1	8/19	Introduction, Syllabus, Microsoft Excel, Google Sheets What is Cost Benefit Analysis (CBA)?
2	8/24	Chapter 1 Introduction to CBA
2	8/26	Chapter 1 Introduction to CBA Term Paper Group Discussion
3	8/31	Chapter 2: Conceptual Foundations of Cost Benefit Analysis
3	9/2	Chapter 2: Conceptual Foundations of Cost Benefit Analysis Chapter 3: Microeconomic Foundations of Cost Benefit Analysis
4	9/7	Labor Day, No Class
4	9/9	Chapter 3: Microeconomic Foundations of Cost Benefit Analysis Problem Set 1 Due
5	9/14	Chapter 5: Valuing Impacts in Output Markets
5	9/16	Chapter 5: Valuing Impacts in Output Markets
6	9/21	Chapter 6: Valuing Impacts in Input Markets
6	9/23	Chapter 6: Valuing Impacts in Input Markets
7	9/28	Midterm 1 Review
7	9/30	Midterm 1 (Online on Canvas with Lockdown Browser)
8	10/5	Chapter 7: Valuing Impacts in Secondary Markets

Week	Date	Topics, Readings, Assignments, Deadlines
8	10/7	Chapter 7: Valuing Impacts in Secondary Markets Problem Set 2 Due
9	10/12	Chapter 4: Valuing Impacts from observed behavior: Direct Estimation of Demand Schedule
9	10/14	Chapter 4: Valuing Impacts from observed behavior: Direct Estimation of Demand Schedule Term Paper Proposal due
10	10/19	Chapter 8: Predicting and Monetizing Impacts
10	10/21	Chapter 8: Predicting and Monetizing Impacts
11	10/26	Chapter 14: Valuing Impacts from observed behavior: Experiments and Quasi Experiments
11	10/28	Chapter 14: Valuing Impacts from observed behavior: Experiments and Quasi Experiments Problem Set 3 Due
12	11/2	Midterm 2 Review
12	11/4	Midterm 2 (Online on Canvas with Lockdown Browser)
13	11/9	Chapter 9: Discounting Future Impacts and Handling Inflation
13	11/11	Chapter 9: Discounting Future Impacts and Handling Inflation Chapter 10: The Social Discounting Rate
14	11/16	Chapter 10: The Social Discounting Rate
14	11/18	Chapter 15: Valuing Impacts from Observed Behavior
15	11/23	Chapter 15: Valuing Impacts from Observed Behavior Problem Set 4 Due
15	11/25	Thanksgiving, No Class
16	11/30	Group Presentations
16	12/2	Group Presentations
17	12/7	Final Review Term Paper Due
Final Exam	12/9 (Wednesday)	Online on Canvas with Lockdown Browser, 9:45 am – 12 noon