

Instructor:	Matthew Holian, Ph.D.
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Office Hours:	Mondays, 5:45-6:15 P.M., and by appointment, in DMH 131
Location/ Days/Time:	DMH 166 / Mondays / 6:30-9:15p.m
Prerequisites:	Econ 1B and Econ 3 or Stat 95, or instructor consent

Faculty Web Page and MYSJSU Messaging

Copies of the syllabus, homework assignments, etc. may be found on Canvas. See my Econ 1B syllabus for information on accessing Canvas.

Course Description

Theory and practice of cost-benefit analysis applied to various topics including public projects and environment. Welfare foundations of CBA, valuation of goods (such as clean air, wilderness, and sports arenas), discounting future values and cost.

Course and Program Learning Objectives (CLOs and PLOs)

Emphasizes *quantitative methods* (ECON PLO3 / ENVS PLO2) & *communication* (ECON PLO5 / ENVS PLO5)

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, and 2.) 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 Textbooks

In my lectures I will draw material from the following two sources. I also expect students to complete the readings listed in the course outline; however, a student should be able to earn an A in this course even if they only complete the required readings from one of these texts (and of course, take excellent notes in class.)

Boardman, Anthony E. et al. *Cost-Benefit Analysis: Concepts and Practice*. Prentice Hall. 4th edition.

>> Other editions are also acceptable.

Fuguitt, D. and Wilcox, S. *Cost-Benefit Analysis for Public Sector Decision Makers*.

>> This title is available through the SJSU library as an eBook.

Recommended Textbook

Angrist, J. D. and Pischke, J. 2014. *Mastering Metrics*, Princeton University Press, Princeton, N.J.
(You can download the Introduction and Chapter 1 here: <http://press.princeton.edu/titles/10363.html>)

Required Computer Software

Students must use a spreadsheet (preferably MS Excel) to complete assignments for this course.

Important Note Concerning Four-Unit Classes

This is now a four-unit course with an introductory statistics prerequisite. This will enable us to cover more and deeper material than in previous semesters. Please be prepared for an appropriately faster-paced course.

Grading and Classroom Policy

The grading scale is: 60-62, D-, 62-68, D, 68-70, D+, 70-72, C-, 72-78, C, 78-80, C+, 80-82, B-, 82-88, B, 88-90, B+, 90-92, A-, 92-98, A, 98-100, A+.

I generally don't allow makeup exams unless there is sufficient notice and a very well justified and documented reason. Please talk to me if you wish you use a laptop during class. Food that emits externalities is not allowed.

Assignments

There will be a midterm and a final worth 20 points each, two Problem Sets worth 5 points each, occasional homework assignments worth 10 points, and a Term Paper (30 points) and a Presentation (10 points).

Assignment	Points	Due Dates
Midterm and Final	40	October 16 and December 18 (20 points each)
Problem Sets	10	October 6 and December 11
Homework	10	Announced in class
Presentation	10	November 27 or December 4
Term Paper	30	Outline 10/16, Draft 11/27, Final Paper on 12/18

Assignment Details

Midterm and Final Exams will contain questions similar to those given on Problem Sets. **Problem Sets** will contain questions similar to end-of-chapter questions from the textbook. The **Term Paper and Presentation** will help students synthesize all CBA tools discussed in the class to produce an original analysis on a topic of contemporary interest. **Homework assignments** ensure students make continuous progress.

Term Paper

Students have two options for completing this assignment. First, students may use the *benefits transfer* methodology, exemplified in the case studies from week 1 (Guerra, 2011 and Krueger, 2003). Papers using the benefits transfer methodology must contain a careful review of the related empirical literature. Alternatively, a student may use *the hedonic method*, *contingent valuation method*, or may *estimate a demand curve* for use in a CBA. Papers using methodologies from this second group must contain either a statistical analysis (i.e. data collection and model estimation,) or survey design (with preliminary implementation and discussion of results.) Finally, during the two meetings on 11/27 & 12/4 students will present their CBA project to the class. Students will then revise their Rough Drafts based on comments received on the presentation.

University Policies

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](http://info.sjsu.edu/static/catalog/policies.html) 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](http://www.sjsu.edu/provost/services/academic_calendars/) at http://www.sjsu.edu/provost/services/academic_calendars/. The [Late Drop Policy](http://www.sjsu.edu/aars/policies/latedrops/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](http://www.sjsu.edu/advising/) at <http://www.sjsu.edu/advising/>.

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](http://www.sjsu.edu/senate/docs/S07-2.pdf) 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](http://www.sjsu.edu/studentconduct/) 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](http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf) 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](http://www.sjsu.edu/aec) (AEC) at <http://www.sjsu.edu/aec> to establish a record of their disability.

Tentative Course Schedule (subject to change with advance notice)

Date	Topic of lecture	Required Readings
28-Aug	Intro to Cost-Benefit Analysis / Conceptual and Ethical Foundations / CBA Examples: Guerra (2009) and Krueger (2003)	BGVW, Ch 1 & 2 FW Ch 1-7
4-Sep	LABOR DAY NO CLASS	
11-Sep	Applied Welfare Economics (AWE) >> Class begins at 6:50p.m. due to Provocative Lecture @ 5:15p.m. in Student Union theatre.	BGVW, Ch 3 FW Ch 8
18-Sep	Applied Welfare Economics (continued)	BGVW, Ch 4
25-Sep	Advanced Topics in AWE: Secondary Markets and Indirect Effects / Discounting, Time Horizons, Inflation, and Decision Rules	BGVW Ch 5 (pp 124-128 only) & Ch 6; FW Ch 9-13 (re-read BGVW pp.32-34)
2-Oct	Dealing with Risk: Sensitivity Analysis	BGVW, Ch 7 (pp.167-87 & 196-97) FW Ch 14
9-Oct	Review for Midterm. PROBLEM SETS	
16-Oct	MIDTERM EXAM OUTLINE	
23-Oct	Predicting and Monetizing Impacts	BGVW, Ch 11 FW Ch 16
30-Oct	Shadow Prices from Secondary Sources	BGVW, Ch 16
6-Nov	Valuing Impacts from Observed Behavior: Direct Estimation of Demand Curves	BGVW, Ch 13 FW Ch 17
13 Nov	Valuing Impacts from Observed Behavior: Indirect Market Methods	BGVW, Ch 14 FW Ch 20
20-Nov	Contingent Valuation: Using Surveys to Elicit Information About Costs and Benefits	BGVW, Ch 15 FW Ch 18
27-Nov	STUDENT PRESENTATIONS ROUGH DRAFT	
4-Dec	STUDENT PRESENTATIONS	
11-Dec	Review for Final PROBLEM SETS	
18-Dec	FINAL EXAM @ 6:30p.m. TERM PAPER @ 11:59pm	

Additional References from Course Schedule

Guerra, E. 2011. "Valuing Rail Transit: Comparing Capital and Operating Costs with Consumer Benefits." *Transportation Research Record: Journal of the Transportation Research Board*, No. 2219, pp. 50–58.

Krueger, A. 2003. Economic considerations and class size. *The Economic Journal*, 113, 34–63.

Holian, M. and Ralph McLaughlin. 2016. *Benefit-Cost Analysis for Transportation Planning and Public Policy: Towards Multimodal Demand Modeling* <http://transweb.sjsu.edu/project/1203.html>