

Public Affairs 881: Cost-Benefit Analysis

University of Wisconsin Madison
Fall 2023 Syllabus, Version 1

Course Information

Instructor: Professor Morgan Edwards (she/her), 301 Observatory Hill Office Building. Please contact me via email to discuss anything about the course at morgan.edwards@wisc.edu.

Meeting Times and Locations: Mondays and Wednesdays, 8:00-9:15 a.m.

This is one of two sections of cost-benefit analysis taught this fall. For the first two sessions (Module 1 and 2), our section will meet in Sterling 2301. For the rest of the semester, the two sections will meet together in Nancy Nicholas Hall 4235.

Office Hours: Office hours will be offered after class (in person) and as needed in person or virtually. You can use office hours to discuss your project and anything else about the course. We will assign a regular meeting time for project each group at the beginning of the semester.

Prerequisites: Familiarity with the basic concepts of microeconomics and statistical inference. Public Affairs 880 and Public Affairs 819, or their equivalents. *Please email me if you have any questions or concerns about your preparation for the course or would like suggestions for extra resources.*

Canvas Site: <https://canvas.wisc.edu/courses/368982>

Textbook (required): *Cost-Benefit Analysis: Concepts and Practice* by Boardman, Greenberg, Vining, and Weimer (fifth edition).

Course Expectations: This is a three-credit course. We will meet for two 75-minute class periods per week over the fall semester. You should plan to spend at least two hours on learning activities outside the classroom for every hour of classroom time. I expect you to complete all readings and assignments for each session *before coming to class* and come prepared to discuss. A key element of the course is a group project for a real-world client. I expect you to give this project a high priority and be professional in your interactions with the client and your classmates.

Learning Outcomes

Cost-benefit analysis (CBA) is an approach for evaluating a policy or project by expressing its total costs and benefits in monetary terms. This may sound straight-forward, but as you will see throughout the semester, it rarely is. At the end of this course, you will be able to:

- **Explain** the basic mechanics of performing a CBA, including methods for valuing costs and benefits, aggregating over time, and analyzing uncertainties.
- **Evaluate** the strengths and weaknesses of different CBAs and propose strategies to address any shortcomings.
- **Debate** the advantages and limitations of CBA for policy analysis and compare it to other approaches.
- **Create** a CBA for a real-world client from start to finish, including scoping, background research, valuation of costs and benefits, uncertainty analysis, and interpretation.

Assessment and Grades

Your progress toward the course learning outcomes will be assessed in multiple ways. Parentheses indicate the weights given to these components in your final grade.

Participation (15%): Class will be a mixture of lectures, discussions, and problem solving. I expect you to complete all readings and assignments before class and come ready to actively participate. For example,

you may be called on to summarize the main arguments from a reading and provide your reaction or explain how you would approach one of the assigned exercises. Remember that engagement means not only sharing your ideas but also listening and responding to what others have to say. You can also participate outside of class time through the discussion board on Canvas.

Midterm Exam (30%): There will be a midterm exam on October 30. The exam will give you an opportunity to demonstrate your knowledge of the basic mechanics of CBA.

Team Project (40%): A large component of the course is a project where you will work in groups to create a CBA for a real-world client. This is where you will move from the theory of CBA to practice. *Please do not take this course if you are unable to devote the time to create a professional-level project.* You should begin your project early in the semester; several project reports throughout the course will help you keep on track and give you opportunities for feedback. Additionally, you are highly encouraged to schedule regular meetings with me to discuss questions and ideas about your project.

- **Summary and Plan** – Prepare a report that describes the issue being addressed in the project and your plan for completion (due September 18).
- **Data Sources and Literature Review** – Prepare a report on the data that you have from the client and/or from the literature and an annotated bibliography with at least ten studies relevant to your project (due October 9).
- **Categories and Measurement** – Prepare a full list of the relevant categories of costs and benefits and a detailed description (with sources) on how you plan to measure each; provide a justification for any costs or benefits that you will not include in your analysis (due October 18).
- **Paper Draft** – Your paper draft should be a polished report that includes an executive summary, introduction, analysis of costs and benefits, discussion of non-monetized costs and benefits, sensitivity analysis, discussion of limitations, recommendation, appendices with detailed methods, and list of references (due December 6).
- **Class Presentation** – Each group will have one class period to present their project. You should prepare to present for 30 minutes followed by 15 minutes of class discussion.
- **Final Paper** – Your final paper should address comments you received from your peer feedback as well as feedback from me. Submit a separate document that lists the comments you received and describes how you addressed them (due December 18).
- **Peer Evaluation** – You will have the opportunity to evaluate the effort and contributions of the other team members on your project. Please wait until you have submitted your final draft to send in your peer evaluations (due December 18).
- **Client Briefing** – You should plan on briefing your client on your final report at their convenience. Depending on schedules, this briefing may occur in December or January.

Peer Feedback (15%): You will be asked to carefully read another team's Cost Benefit Project and submit a memo with constructive feedback and suggestions (due December 14).

Values and Policies

Justice, Diversity, Equity, and Inclusion: Justice, equity, diversity, and inclusion are central to our work in the classroom and beyond. I echo the university's statements on diversity and inclusion:

Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world. (Source: <https://diversity.wisc.edu>)

I recognize the importance of eradicating systemic oppression of all kinds and am actively committed to this work. Policy analysis methods (including CBA) have played roles in both uncovering and obscuring – and therefore perpetuating – systemic injustices. I aim to center equity and justice in this course. I welcome your feedback and suggestions on how to further these efforts.

Land Acknowledgement: I join the university in acknowledging the stolen Ho-Chunk land on which the University of Wisconsin Madison campus sits:

The University of Wisconsin Madison occupies ancestral Ho-Chunk land, a place their nation has called Teejop since time immemorial. In an 1832 treaty, the Ho-Chunk were forced to cede this territory. Decades of ethnic cleansing followed when both the federal and state government repeatedly, but unsuccessfully, sought to forcibly remove the Ho-Chunk from Wisconsin. This history of colonization informs our shared future of collaboration and innovation. Today, UW-Madison respects the inherent sovereignty of the Ho-Chunk Nation, along with the eleven other First Nations of Wisconsin.

(Source: <https://chancellor.wisc.edu/blog/our-shared-future>)

For more information on the Ho-Chunk Nation, please refer to: <https://ho-chunknation.com>.

To learn about other places of significance to you and the practice and importance of land acknowledgements, please see: <https://native-land.ca>.

Accessibility and Accommodations for Students with Disabilities: I am committed to making this class accessible for all students, including upholding all university disability policies:

The University of Wisconsin Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform me of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. I will work either directly with you or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA. (Source: <https://mcburney.wisc.edu/instructor>)

Additionally, I recognize that accessibility needs may arise that are not explicitly covered by these policies. You are invited to contact me directly to discuss any situation that impacts your ability to engage with this course and how I can best support you and your learning.

Absences and Religious Observances: Participation in class is an important part of this course. However, I recognize that situations can arise that require you to miss class. Please contact me in advance of any planned absences, or as soon as is reasonable after unplanned absences, so we can discuss ways to make up what you missed. This may take the form of a memo reflecting on pre-class assignments. If a religious observance will require you to miss class during the midterm exam or final presentations, please notify me over email within the first two weeks of the semester.

Academic Integrity: By virtue of enrollment, each student agrees to uphold the high academic standards of the University of Wisconsin Madison. Examples of misconduct include cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts. Misconduct may result in disciplinary action including but not limited to failure on the assignment or course, probation, suspension, or expulsion. For more information please see: <https://conduct.students.wisc.edu/syllabus-statement>. You can also contact me directly if you have any doubts or concerns.

A large portion of your work in this course is a Cost-Benefit Project that will culminate in a written report. All group members are collectively responsible for understanding and applying the rules for acknowledging, paraphrasing, and quoting sources in professional writing. You should review all sections of your report

carefully with these rules in mind. You can also refer to the Writing Center Handbook: <https://writing.wisc.edu/handbook>.

Tentative Schedule

Please complete readings and exercises before each class session and come prepared to discuss. For modules that are spread out over multiple class periods, due dates for readings and exercises will be announced in class and on Canvas. More details on each module, including assigned readings and exercises, can be found on Canvas.

September 6 – Welcome to Cost-Benefit Analysis! (Edwards)

September 11 – Previous Projects (Edwards)

September 13 – Conceptual Foundations (Weimer, plus invited speaker from the writing center)

September 18, 20, 25 – Valuing in Primary Markets (Weimer)

September 27 – Application Example: Oil Market (Edwards, plus invited speaker Owen Herrnsstadt)

October 2 – Valuing in Secondary Markets (Weimer)

October 4, 9 – Basics of Discounting (Weimer)

October 11, 16 – Expected Values and Value of Information (Edwards)

October 18 – Option Price and Option Value (Weimer)

October 23 – Uncertainty Analysis and STATA (Edwards)

October 25 – Life Cycle Analysis (Edwards)

October 30 – Midterm Exam

November 1 – Midterm Recap

November 6 – Demonstrations and Experiments (Edwards)

November 8, 13 – Observational Studies (Edwards)

November 15, 20 – Contingent Valuation (Weimer)

November 22 – Asynchronous Project Discussions (Edwards)

November 27 – Contingent Valuation (Weimer)

November 29, December 4 – Alternatives to CBA (Edwards, plus invited speaker from outreach)

December 6, 11, 13 – Project Presentations