Course Description:
Benefit-cost analysis (BCA) aims to measure the economic efficiency of a project, program, or policy by providing a formal description of the associated benefits and costs. Its purpose is to order choices in a way that is informative for decision makers. BCA is an appropriate tool for public decision-making, as it can be used to evaluate decisions from a societal viewpoint. It is also standard practice within the non-profit sector. If you intend to enter the public or non-profit sector, you will almost certainly be a consumer of a BCA at some point, and you may also conduct or contribute to one. This class will introduce you to the fundamentals of BCA, as both a consumer and producer. Thus, you will develop the skills to interpret and evaluate the quality of a BCA, as well as the skills to conduct an original analysis, communicate your findings, and offer a policy recommendation.

Prerequisites:
Evans students must have successfully completed PBAF516 and PBAF517. Graduate students from other departments are welcome, though they must have the equivalent amount of economics preparation.

Assignments and Grading:
Assignments:
There will be four assignments. These are intended to help you apply the concepts in class, build practical skills, and move you along on your final project (see below). You are free to work in groups, although you must turn in your own work. Problem sets will be graded for completeness and accuracy, with more emphasis on the former. Points may be deducted for a lack of neatness or organization. Some problems will require use of a spreadsheet program like Excel.

Assignments are due by the beginning class and should be submitted online via Canvas. Points will be deducted for late assignments, and no credit will be awarded to assignments more than four days late. If you are ill or cannot attend class, you must still submit the work on time. If there is a serious health issue, please let me know with documentation from your doctor that this issue prevented completion of an assignment.

Midterm Exam:
The midterm exam is intended to gauge your familiarity with the foundational concepts covered in roughly the first half of the class. The exam will be open-book and open-notes. The exam will be held in class on February 15.
Class Project:
To further apply your skills, you will conduct a BCA. Because BCA is applied in a wide variety of fields, and because I expect your interests will vary, this is also an opportunity for you to explore some of the issues in BCA within your topical area of interest (e.g. international development, health, education, environmental policy, etc.).

You should work in groups of 2-3 people. This is partly to build group work skills, and partly because the size of this project is often larger than students initially anticipate. The complexity of analysis and length of your paper should be commensurate with the group size. You should form your groups and identify topics as soon as possible. If you prefer to work alone (with a good reason), please see me to discuss your options.

You will submit a 1-page proposal by January 23. Your proposal should include a title and 2-3 paragraphs on the research question and what data you have available to you. Finding data will be a challenge. Choosing a current and local topic might be helpful in that you can contact a local agency for help with assumptions or data. In some cases, you may have to make assumptions or generate representative data – see me if you are concerned. Your analyses will most likely be ex ante, though you are free to do an ex post analysis.

As an intermediate product, you must submit a 2-page outline of your paper by February 20. The main concern at this point is not results, but a clear plan for analyzing the data you should have collected by this point.

The final paper will be due Tuesday, March 13 at 5pm. It should be at least 10 and no more than 15 pages (including tables and graphs), and should be structured similar to the analyses we read in class (or perhaps the study you critiqued in Assignment 1). Your analysis must be transparent and well-documented. You should use Excel or a spreadsheet program to organize your analysis, and this will also be submitted. Your analysis must include a sensitivity analysis to key parameters. Each section of the final paper must have a clearly defined author who is responsible for that section (identify this in the footer of each section). This is a team project, but your grade will be based both on the quality of your team’s final report, as well as the quality of your individual section. Clear and succinct writing is paramount.

Finally, your group will present your analysis to the class in one of the final class sessions. Even if you are not finished with your analysis, you can use this opportunity to present your interim findings and collect feedback from your peers. I will give you more details later in the quarter, but you should plan on a 10-minute presentation.

Course Grading:
See the Evans School guidelines for grading expectations, found on page 29 of the student handbook.

40%: Assignments (10% each)
20%: Midterm exam
30%: Project & presentation (2.5% for on-time proposal, 2.5% for on-time outline, 10% presentation, 20% paper)
10%: Class participation, discussion preparation, in-class exercises

When submitting assignments and the midterm exam, please specify your student ID on the paper but do not include your name.

**Expectations:** Students are expected to attend all class sessions, be on time for class, and be respectful of everyone in the classroom. This includes not talking during lecture, eating and drinking quietly, being respectful of others’ comments and opinions, and turning off cellphones during class. Students should refrain from using laptops/tablets to take notes during class unless an academic accommodation is needed. However, please do bring a calculator to class.

**Academic Integrity:** As a participant in this class, you agree to uphold the academic and community standards set forth in the Evans School Student Handbook. Students are expected to review the definition of plagiarism and ensure that their work is entirely their own. Cheating or submitting work that is not your own won't be tolerated.

**Disability Academic Accommodations:** If you have an academic accommodation from the UW Disability Resources for Students office, please let me know as soon as possible.

**Textbooks and readings:** The required textbook is "Cost-Benefit Analysis: Concepts and Practice" by Anthony Boardman, David Greenberg, Aidan Vining, and David Weimer. I recommend using the most recent (4th, 2011) edition, but the 3rd edition should also be fine.

Additional readings (with links) are on the syllabus, and these readings will generally be available on Canvas.

Please note that the syllabus may be adjusted as the quarter progresses. Readings may be added, so please check the syllabus and website regularly.
Schedule:

Note: The textbook is denoted as BGVW. Readings should be done before a given class session.

Jan 4    Introduction and Overview to BCA

Readings: BGVW Ch. 1 and 2

Skim the Washington Institute for Public Policy BCA

Skim the BCA case studies at the Harvard School of Public Health

Jan 9    BCA Case Study; Valuing Impacts in Primary Markets


(Be prepared to discuss with your colleagues the questions in Assignment #1 in relation to this article.)

BGVW Ch. 3 and 4

Jan 11   Valuing Impacts in Primary Markets (continued)


Jan 16   Valuing Impacts in Secondary Markets

Readings: BGVW Ch. 5


Jan 18   Investment Criteria and Discounting

Readings: BGVW Ch. 6

Assignment #1 Due
Jan 23  Distributional Effects; Aggregating Welfare Changes


*Supplemental:*

Project Proposals Due

Jan 25  Risk and Uncertainty

Readings:  BGVW Ch. 7 (through p. 187)


*Supplemental:*

Jan 30  Choosing a Social Discount Rate

Readings:  BGVW Ch. 10


Assignment #2 Due
Feb 1  Revealed Preference
Readings:  BGVW Ch. 12 (up to page 292), 13, 14

*Supplemental:*


Feb 6  Existence Value and Stated Preference
Readings:  BGVW Ch. 9


Feb 8  Stated Preference (continued)
Readings:  BGVW Ch. 15

U.S. Environmental Protection Agency (EPA). 2010. "*Guidelines for Economic Analysis.*" Read 7.3.2 "Stated Preference" through 7.4 "Benefit Transfer" (pg.7-35 to 7-49).

Assignment #3 Due

Feb 13  Value of a Statistical Life and Other Shadow Prices
Readings:  BGVW Ch. 14 (pp. 345-349), Ch. 16

Supplemental:

Feb 15 Midterm Exam

Feb 20 BCA in Social Policy
Readings: BGVW Ch. 12 (from page 293)


Supplemental:

Project Two-Page Outline Due

Feb 22 Mandelbrot Role-Playing Exercise
Assignment #4 Due (Feb 22 and 23)

Feb 27 Cost-Effectiveness Analysis; BCA in Developing Countries
Readings: BGVM: Chap. 17, 18 (skim)

Mar 1  In-Class Project Work Session

This class will be an opportunity for you to work on your group projects. The precise format of the class will depend on how all the projects are developing (for example, there may be some questions that everyone has that we could discuss as a group). Most likely you will be working in your groups. This is not a day off; your class participation grade will depend in part on your attendance and focus in this session.

Mar 6  Presentations

Mar 8  Presentations and Wrap-Up

Mar 13 Final Paper Due