SPP/ECON 573
Fall Term 1997

Alan Deardorff
Course Syllabus

THE UNIVERSITY OF MICHIGAN
School of Public Policy
and
Department of Economics

BENEFIT-COST ANALYSIS

Subject of the Course:

The aim of this course is to teach you how to do benefit-cost analysis. On one level, this is pretty simple: just sum all the benefits of a program, subtract all the costs, and there you are. If net benefits are positive, the program is a winner; if not, not. In choosing among programmatic options, take the one with the highest level of net benefits.

But obviously there are complications. First, it is not always easy to measure benefits and costs -- you have to know some economics and perhaps even some philosophy. Second, benefits and costs can occur at different times, and you have to adjust for that problem. Third, benefits and costs are received and borne by different people, and both the economics and the politics of dealing with distributional issues can get tricky. Fourth, there are many different types of programs for which an aspiring public servant might want to do a benefit-cost analysis. This list goes on, and it will easily fill a semester for us to cover it adequately.

Prerequisite:

SPP/Econ 555 or equivalent courses in microeconomics

Organization:

The course meets twice a week, Mondays and Wednesdays, 8:30-10, in room 1309 SEB. The TA, Tom Kornfield, and I will also hold regular office hours:

Deardorff	458 Lorch	Mondays, 2:30 - 3:30 PM Wednesdays, 10:30 - 11:30 AM
Kornfield	365 Lorch	Wednesdays, 4:30 - 6:00 PM Fridays, 1:00 - 3:00 PM

Also, feel free to call us or e-mail us for an appointment. We may be reached as follows:

Deardorff	764-6817	alandear@umich.edu
Kornfield	662-1605	kornfiel@umich.edu
Group		ben.cost97@umich.edu

(Includes all students in the course plus Kornfield and Deardorff)

Home Page:

Whenever possible, materials for the course will be posted on the course home page:

http://www.econ.lsa.umich.edu/~alandear/courses/573/573.html

Requirements:

Requirements for the course consist of a series of problem sets, a "case exercise," two in-class mid-term exams, and a term paper. There is no final exam.

The most important requirement for the course is the **term paper**, in which you will do a benefit-cost analysis on a topic of your choice. This will be done in two parts: a one page outline or prospectus due October 1, and the paper itself of 10-15 pages due on the last day of class, December 10. The paper topic must be approved by me, so come and talk to me about your paper ideas as early in the semester as possible. The paper may be done in groups, limited to 3 persons maximum, but you should be warned that grading will be slightly tougher in this case. A group will turn in only a single paper, jointly written, and the same grade will be given to all members of the group.

The **prospectus**, by the way, is not an irrevocable commitment. If you later decide to change what you do in a significant way, or even disband your group and work separately, you are welcome to, but only if you first clear the change with me in writing (which includes e-mail). I won't object, except if I think you are getting yourself into trouble.

The **case exercise** will be like an elaborate problem set, but with only one large problem, applying benefit-cost to some hypothetical situation that will be spelled out in some detail. My plan is to hand it out on Monday, Oct. 27, and have it due 48 hours later, at the beginning of class that Wednesday, Oct. 29. If you see problems with that timing, please let me know immediately.

For the case exercise, you will definitely work in groups, of two or perhaps three, that I will assign. That is, you don't get to pick your partners for this assignment. I will make the assignments by mid-October, so that you and your partner(s) will have time to think about how you will coordinate. As with the term papers, you will turn in only a single document for your group, and you will share the same grade.

Problem sets will be handed out a week before they are due, and should be done individually. You may discuss them with other members of the class, but the work you hand in should be your own. It is important that you show clearly *how* you get your answers, and not just the answers themselves, and they will be graded accordingly. Problems (and exams) will use tools that may have been presented only in class, as well as tools from your previous course in microeconomics, so do not count on the textbook and other readings to tell you all you need to do them well.

The two **exams** will be in class, closed-book. You should bring a calculator, although it will not be needed for most of the questions.

Schedule and Weights:

The schedule for the requirements and their contributions to your final grade are as follows:

Problem sets (20%)		
#1	Sep. 17	4%
#2	Sep. 24	4%
#3	Oct. 8	4%
#4	Oct. 22	4%
#5	Nov. 12	4%
Case Exercise	Oct. 29	20%
Midterm exam #1	Oct. 1	10%
Midterm exam #2	Nov. 19	15%
Term paper (30%)		
Prospectus	Oct. 1	5%
Paper	Dec. 10	30%

All of the problems sets, as well as the case exercise, the prospectus and term paper are due at the beginning of class on the stated day. Late assignments will be penalized by one-third of a letter grade per 24 hour period beyond the deadline.

Text:

The textbook for the course is *A Guide to Benefit-Cost Analysis*, 2nd edition, by Edward M. Gramlich, Prentice Hall, 1990. It is available from the usual bookstores around campus. A coursepack containing the supplementary required readings will be available at Dollar Bill Copying, 611 Church St.

COURSE OUTLINE AND READING LIST

Note: The intention is to complete through I-C by mid-October, for use on the Case Exercise, and to complete through II-A by mid-November for the second exam. The remaining topics will be addressed only as time permits, during the last month of the class while you are working on your papers. I would especially like to have a series of student presentations during the final classes of the term and will be asking for volunteers in late September. These presentations could be on any of the topics and readings listed in the remainder of the syllabus, or they could be on the application and/or relevance of benefit-cost analysis to a policy area of your own interest and expertise. In either case, I would hope for 20-30 minute presentations followed by discussion.

I. Principles of Valuation

A. Introduction

Gramlich, Ch. 1, 2, 3

B. Partial Equilibrium

Gramlich, Ch. 4
Porter, Richard C., "Michigan's Experience with Mandatory Deposits on Beverage Containers," *Land Economics*, May 1983

C. Timing and Discount Rates

Gramlich, Ch. 6
U.S. General Accounting Office, "Discount Rate Policy," May 1991

D. General Equilibrium

Gramlich, Ch. 5
Brown, Drusilla K, Alan V. Deardorff, and Robert M. Stern, "A North American Free Trade Agreement: Analytical Issues and a Computational Assessment," *The World Economy*, January 1992, pp. 11-29.

II. Issues and Complications

A. Distribution

Gramlich, Ch. 7

B. Human Investment

Gramlich, Ch. 9
Gramlich, E., "Evaluation of Education Projects: The Case of the Perry Preschool Program," *Economics of Education Review*, 1986.

C. International Considerations

Tarr, David G. and Morris E. Morkre, "The Costs of Voluntary Restraint Agreement on Japanese Automobiles," Chapter 3 in *Aggregate Costs to the United States of Tariffs and Quotas on Imports*, Federal Trade Commission, December 1984, pp. 54-74.
Deardorff, Alan V., "International Conflict and Coordination in Environmental Policies," in process.

III. Other Perspectives

Aaron, H., "Public Policy, Values, and Consciousness," *Journal of Economic Perspectives*, Spring 1994.
Railton, "Cost-Benefit Analysis as a Source of Information about Welfare"
Sudgen, R., "Welfare, Resources, and Capabilities: A Review of Inequality Reexamined," *Journal of Economic Literature*, December 1993.

IV. Applications

Devaney et al., "Medicaid Costs and Birth Outcomes: The Effects of Prenatal WIC Participation and the Use of Prenatal Care"
Hatziandreu et al., "A Cost-Effectiveness Analysis of Exercise as a Health Promotion Activity"
Eddy, D., "Screening for Cervical Cancer," *Annals of Health Medicine*, 1990, pp. 214-226.
Porter, Richard C., excerpts from *Thinking Economically about Cars and Drivers*, in process, will be available on the Web.