Course Description

This course introduces students to key issues and findings in the valuation and production of health. It combines theoretical and empirical techniques from health economics and environmental economics. At their cores, both disciplines deal with market failures – in particular, public goods, externalities, and moral hazard. The first part of the course provides an introduction to the theoretical framework used to analyze and value the provision of health and environmental goods. The second part focuses on policy-relevant empirical measurements of the valuation of health and safety – how much is society willing to pay for improvements in health and safety? The remaining two parts of the course explore the different ways in which we can produce health and safety. What types of investments work and what types do not? Which investments are cost effective? In these latter two parts, we first explore what we know about the environmental and social production of health, and then examine whether medical care is a cost effective means of producing health.

The first goal of the course is to encourage students to consider the tradeoffs made when investing in the provision of health and environmental goods and to understand how economics can provide a framework to compare these choices and guide policy. The second goal is to familiarize students with the empirical methods that researchers use to estimate the effects of health and environmental policies. Most students will not go on to do graduate work in this field, but upon completion of the course they should be able to analyze a study described in the newspaper and ascertain its credibility.

Prerequisites
Students should be familiar with intermediate micro economic theory and basic probability and statistics. The former can be satisfied with EEP 100 or 101 or ECON 100A or 101A (or equivalent). The latter can be satisfied with STAT 20, 21, 25, or 131A or EEP 118.

Assignments and Grading

I will assign approximately 6 problem sets during the course of the semester. On each problem set, a random sample of the questions will be ungraded. Completing the problem sets will also be very helpful for the midterm and the final examination. Overall grades will be based on performance on graded questions in the problem sets (20%), participation (10%), the midterm grade (25%), and the final exam grade (45%).

Textbooks and Readings

There is no single text for the course, but there are readings that pertain to each section of the course. Links to these articles are included below; the articles should be accessible to anyone on the UC Berkeley network (either physically or via VPN). Starred readings are mandatory – one or more exam questions may use material from the starred readings.

Course Outline

SECTION 1 – THEORETICAL TOOLS

Weeks 1 and 2 – Review of Market Failures

Externalities (Instructor Notes)

Public Goods (Instructor Notes)

Benefit-Cost Analysis (Instructor Notes)

SECTION 2 – THE VALUATION OF HEALTH

Weeks 3 and 4 – Statistical Value of Life and Health

How do we value improvements in safety or health?


Basic empirical tools.

Randomized trials versus observational data: the role of omitted variables bias (Instructor Notes)
Simple linear regression (Instructor Notes)

Simple differences-in-differences (Instructor Notes)

Empirical estimates of the statistical value of life.


SECTION 3 – ENVIRONMENTAL AND SOCIAL PRODUCTION OF HEALTH

**Week 5 – The Health Production Function**

Why should we care about costs?


**Weeks 5 and 6 – Air Pollution**

Advanced empirical tools.

Instrumental variables (Instructor Notes)

The effects of air pollution on infants.


The effects of air pollution on adults.


Week 7 – Climate Change

The effects of short-term climate fluctuations on mortality.


Week 8 – The Built Environment

The effects of fast-food on obesity.


Week 9 – The Social Environment

The effects of social competition and status on health.


**SECTION 4 – MEDICAL PRODUCTION OF HEALTH**
Weeks 10 and 11 – Does Medical Spending Produce Health?

The effects of health care expenditures on health.


Brook, Robert, John Ware, William Rogers, Emmett Keeler, Allyson Davies, Cathy Sherbourne, George Goldberg, Kathleen Lohr, Patricia Camp, and Joseph Newhouse. The Effect of Coinsurance on the Health of Adults: Results from the Rand Health Insurance Experiment, 1984, Chapters 1-4.


Optional Readings:


Week 12 – Market Failure in the Provision of Healthcare

Adverse selection in insurance markets.


Moral hazard, externalities, and other market failures in healthcare. (Instructor Notes)