Course Goals:
*To develop in students an understanding of the economic theory and principles for developing new environmental policies and evaluating current environmental policies of air and water quality.
*Topics include externalities, public goods, reinterpretation Pigouvian taxes as "green taxes" with corresponding double efficiency gains, evaluating of environmental standards as well as environmental policies such as tradeable discharge permits and emissions markets.
*The theory and techniques for valuing improvements in air and water quality using hedonic property value, travel cost and contingent valuation methods will be presented.

Texts: Baumol and Oates: Theory of Environmental Policy, Second Edition
There is also a class reader composed of articles mentioned below for sale at bookstore.

There will be 2 midterms, a final and a term project. The 2 mid terms and project are equally weighted in determining your grade. More details on the term project will be provided in a separate handout. The first Mid-Term is tentatively scheduled for the Thursday February 23th. I do grade on a curve and I use plus/minus grading.

I. BASIC CRITERIA & INTRO FOR EVALUATING ENVIRONMENTAL POLICY
   A. Goals of Society
      1. Economic Efficiency and Equity
      2. Efficiency in Consumption, Production and Jointly
   B. Competitive Market Allocations and Efficiency for Private Goods
   C. Market Failure: Externalities, Public Goods and Non-convexities


D. Rationale for Government intervention in environmental management and solutions- Pigouvian taxes or property rights.
   A note on the pro's and con's of taxing output versus emissions.

E. When Coase Theorem is and is not likely to be a solution.
READINGS: Pages 9-13, Chapter 3, pages 32-35

F. Government Failure: Inefficient regulations such as uniform standards or too high of standards could make matters worse than unregulated externalities.

G. Need for Economically Efficient Environmental Policy so as to not sacrifice goals due to high cost of means.
II. FIRST BEST ANALYSIS OF INTERNALIZING EXTERNALITIES

A. Local and Global Optimality with a Single Sector
READINGS: Chapter 7, pages 91-93 and pages 97-99;

B. Dangers of Piecemeal Policies over Externalities and Media
   Competitive level of one externality generating output may not be excessive if there are other outputs with even higher externalities per unit of output relative to their value.
READINGS: Chapter 7: 91-93 and 103-106.

C. Advantages of Green Taxes: Raising Tax Revenue while Replacing Distortionary Taxes with efficiency inducing taxes.
Double Dividend Reconsidered by William Jaeger (2001 AERE newsletter--in Reader)

II. SOME SECOND BEST CONSIDERATIONS

A. Monopolistic Market Structures and Pollution Taxes
READINGS: Chapter 6: pages 79-88;

B. Taxes Versus Subsidies: Short run and Long run effects
READINGS: Chapter 14

C. Uncertainty and Choice of Taxes versus Quantity Controls (Permits)
   1. Equivalence of instruments under certainty (dual)
   2. Equivalence of instruments with uncertainty regarding benefits
   3. Lack of Equivalence when uncertainty regarding costs.
   4. How Slopes of MB and MC influence choice of Taxes vs Permits
   5. Mixed system of Permits and Taxes
READINGS: Chapter 5

   6. Empirical estimates of losses with uncertainty and nonlinear costs

III. THE NEED FOR VALUATION OF EXTERNAL SOCIAL COSTS TO SET OPTIMAL EMISSIONS, STANDARDS OR EFFLUENT TAXES
IV. METHODS FOR VALUING EXTERNAL SOCIAL COSTS OF POLLUTION

V. SECOND BEST ENVIRONMENTAL POLICIES
   A. Standards-Tax approach
      1. Excessive Costs of Uniform Standards
      2. A Standards & Tax Combination when MB and MC uncertain
   READINGS: Chapter 11
   B. Marketable Emissions Permits
   READINGS: Chapter 12
   C. Stochastic Weather Influences and Taxes vs Stds Again.

VII. Recent Applications and Innovations in Environmental Policy
   A. Economics of Recycling and Deposit-Refund Systems

B. Improving Urban Air Quality: The Automobile Problem (and Land Use)

VIII. Environmental Risk Analysis
Reader: Loomis and Frasier outline.

IX. Natural Resource Damage Assessment

William Jaeger. Double Dividend Reconsidered. (2001 AERE newsletter; Does not need copyright clearance, it is not copyrighted)


Margaret Walls and Alan Krupnick. The Cost-Effectiveness of Methanol Vehicles. Resources Summer 1990. (Says it does not need copyright clearance)


Loomis and Frasier outline. Environmental Risk Analysis; Written by myself (Loomis) and another faculty member here at CSU (Marshal Frasier) do does not need copyright clearance.