ARE 241

AGRICULTURAL AND ENVIRONMENTAL POLICIES:
Economics of Production, Technology, Risk,
Agriculture, and the Environment

Tuesdays and Thursdays
2:00 p.m. to 3:30 p.m.
332 Giannini Hall

General

The class will cover major bodies of literature in agricultural resource economics pertaining to production, risk, agricultural input, water, pesticides, technology adoption, and agricultural and resource policy. Many of the topics are pertinent for resource and development economics, and most of the presentations will rely on work that was done in our Department addressing California agricultural and resource problems.

Several lectures will be devoted to student presentations. Each student will be given the opportunity to present a policy brief on current policy issues. Last year’s student presentations addressed issues on the Endangered Species Act, the Sugar Program, U. S. Aid Policies, Agricultural Labor and Immigration, and Intellectual Property Rights.

Some of the lectures will be quite technical and present widely used models in detail. Other lectures will be more general and overview several important bodies of literature and their relation to policy and historical development. There will be three homework assignments.

Outline

I. Overview
   A. Overview of U. S. Agricultural and Resource Policy
      (2 lectures)
   B. Industrialization of Agriculture and Its Implication
   C. Productivity of Agricultural Research and the Land-Grant System

II. Economics of Production
   A. Alternative Approach to Analyzing Production and Productivity
   B. Putty-Clay Models
   C. Aggregation from Micro to Macro
   D. Family Production Function

III. Economics of Decision Making Under Uncertainty
   A. Economic Modeling of Behavior Under Risk
   B. Measures of Risk Aversion and Their Interpretation
C. Measuring Risk: Mean-Preserving Spread and Stochastic Dominance
D. Safety Rules
E. Uncertainty in Production
F. Mean Variance Models
G. Estimation of the Risk Aversion Coefficient
H. Validity of the EU Model

IV. Economics of Technological Change
   A. Induced Innovation
   B. Technology Adoption
   C. Diffusion

V. Practical Policy Analysis

VI. Student Presentations

VII. Economics of Agricultural Resources
   A. Pesticides
   B. Water
   C. Endangered Species
   D. Purchasing Funds

IX. Sustainable Development

**Reading List**

I. Overview of U. S. Agricultural and Resource Policy


II. Economics of Production


### III. Economics of Decision Making Under Uncertainty


### IV. Economics of Technological Change


V. Policy Analysis


VI. Student Presentations

VII. Economics of Agricultural Resources

A. Pesticides


B. Water


VIII. Sustainable Development


