INTRODUCTION TO DECISION ANALYSIS
(Economics 190-01)
Prof. Klaus Nehring
Spring 2003

Syllabus

Office: 1110 SSHB, 752-3379.
Office Hours (tentative): T 10:00-12:00, W 4:10-5:10.

Prerequisites: Math 16A, Statistics 13, Econ 100.

Required Reading:


  (The book costs new $50.00 which is ridiculous; the relevant chapters will be made available at an affordable cost).

- Reader “Introduction to Decision Analysis” will be available at Navin’s.

Optional Further Reading:

The following are two superb books on applying decision analysis written for the general reader. The first emphasizes everyday applications, the second business applications.


Program: The course has two main themes. First, *how to think about and make good decisions*; this is *normative* decision analysis. And second, *how people in fact tend to make decisions*; this is *descriptive* decision analysis. Descriptive decision analysis demonstrates the existence of many hidden traps in people’s decision making. Normative decision analysis provides the conceptual tools to analyze decision problems effectively and overcome those traps; it will help you make smarter choices, both in your private and your professional life. You will also better understand economic risk and uncertainty, for instance in the context of financial markets.

Course Requirements and Organization:

There will be regular, almost weekly, homework assignments. Regular work on the homework is absolutely necessary to succeed in the class. To further encourage it, I will include in each exam at least one problem from a prior homework. While the textbook material is fairly small (a bit more than 100 pages), there will be a large amount of additional required reading introducing to the great variety of real-world applications.

Grading:

Midterm (+possibly quizzes) 50% + Final 50%.

– I may adjust the grade one step up for regular, intelligent participation.

– I may change the grading scheme somewhat depending on the availability of a reader.
1. INTRODUCTION


2. THE BASICS OF PROBABILITY


Revising Beliefs with New Information: Bayes’ Rule


3. HEURISTICS AND BIASES


4. VISUALIZING LINKED DECISIONS: DECISION TREES

- RAIFFA, ch. 1 & 2

**Application to Finance: Option Pricing**


**5. DECISION MAKING UNDER RISK**

**The Economic Approach: Expected Utility Theory**

• RAIIFA, ch. 4


**The Psychological Approach: Prospect Theory**


6. REAL UNCERTAINTY

Assessing Chances: Subjective Probability

- RAIFFA, ch.5

Predictive Accuracy of Individuals

- Yates, F., Judgment and Decision Making, Englewood Cliffs 1990, ch. 3 and 4

Predictive Accuracy of Financial Markets