Course Outline for Economics 4070

Texts are
P - Perloff
TNP - The New Palgrave

1. Introduction to Decisions under uncertainty
2. Lotteries
   - Definition of a lottery
   - The basic urn problem
3. Decisions using Expected Monetary Value (EMV)
   - Definition of the EMV P 17.1
   - Decision flow diagrams
   - Bayes Theorem
   - Solving Decision Flow Diagrams
   - The Value of Perfect Information
4. Introduction to Expected Utility Theory P 17.2
   - The Saint Petersburg Paradox (or EMV does not always work)
   - Risk Preferences (basics)
   - The Certainty Money Equivalent
   - Mean Variance Analysis P 17.3
   - Basic Reference Lottery tickets (BRLT)
   - Compound Lotteries
   - Substituteability and the Independence Axiom
   - Creating a 'utility function' using BRLTs
   - Some other axioms, previously ignored
   - The expected utility hypothesis defined
5. The three outcome case (may be dropped)
   - Pictoreal representation
   - Risk aversion
   - More is better - First Order Stochastic Dominance
   - Increases in risk
   - The Allais Paradox
6. Risk Aversion
   - Avoiding risk P 17.3
   - Measures of risk aversion
7. The state dependent utility approach
8. First Order Stochastic Dominance
9. Increases in risk
10. Introduction to Game theory
11. Normal form games
    - Dominance and weak dominance
    - Nash Equilibrium
    - Applications - Bertrand duopolies
    - Mixed strategies
12. Extensive form games
    - Perfect information
    - Normal form representation - Nash equilibrium
    - Credibility - Subgame perfect equilibrium
    - Imperfect information - Sequential equilibrium
    - Incomplete information
13. Adverse Selection
    - Signalling worker quality through education
    - Insurance contracts
14. Moral Hazard

Back to Course Page