Week 02
February 13-17, 2006

- **Recitation 02: Tuesday**

  - Covers Section 1.3-1.4
  - Review Conditional Probability: Verify the conditional probabilities satisfy the 3 axioms of probability (p19)
  - Stress all previous un-conditional probability properties have equivalent conditional forms.
  - Multiplication Rule, Total Probability Thm., Baye's rule... lots to do!
  - Problem 1 and 2 cover conditional probability in the context of coin flips. Each is rather short, and light on calculations allowing more focus on the concepts.
  - Problem 3 is a longer involves significant calculation and covers all concepts.

- **Recitation 03: Thursday**

  - Covers Section 1.5
  - First introduction to independence
  - How to show/verify independence? What's sufficient for PSet's or Quiz's?
  - Conditional Independence
  - Are arbitrary combinations of independent sets independent? Set theoretic combinations?
  - Problem 1 uses independence to sneak in a Binomial solution. Remember that students haven't seen Binomials yet. Presentation should be from ground up... independence applied to tot prob thm. Maybe best to do last?
  - Problem 2 Nice thought problem distinguishing unconditional independence from unconditional independence.
  - Problem 3 Walks though several small independence questions.

- **Tutorial 01: Thursday, Friday**

  - Covers Section 1.3-1.5
  - Problem 1 Strong concept and thought problem, with very little calculation. Great practice for setting up the model for PS problems. A rather long problem, but length has strong variation linked to how much discussion one entertains on alternative solutions.
  - Problem 2 Nice clean use of Baye's Thm.
  - Problem 3 Highlights difference between independence and pairwise independence.

- **Problem Set 02: Out 2/15, Due 2/23**

  - Covers Section 1.3-1.5
  - Problem 1 and 2: Warm ups with topics from 1.3 with some independence
  - Problem 3 Practice with Baye's and modeling word problems

– Problem 4 A VERY long and challenging problem using all three sections, while stressing independence issues.

– Problem 5 Grad: Nice conceptual problem with a very clean solution if modeled precisely.