

22S:138, Bayesian Statistics
Fall 2004
Instructor: Cowles
Information on Midterm 1

- Midterm 1 will be given Mon. 10/4 in class.
- It will cover the following topics:
 - Probability: addition rule, multiplication rule, conditional probability, independence, law of total probability
 - Probability: Bayes' theorem
 - Assessing a subjective probability
 - Priors
 - * informative and noninformative
 - * conjugate and nonconjugate
 - * Jeffreys' priors
 - Likelihoods
 - Posterior distributions and inference using them
 - Posterior predictive distributions
 - Robustness
 - Bayesian inference for one-parameter models
 - * binomial probability
 - * Poisson rate parameter
 - * normal mean (variance assumed known)
 - * normal variance or precision (mean assumed known)
 - * possibly others
 - Bayesian inference for normal mean and variance (both unknown); Note: only if we get to this topic in lecture by Wed. 9/29
 - use of R/Splus functions that have appeared in lab or homework
- Questions will be mostly short answer, with a little calculation. Some will involve interpreting computer output that I will provide.
- You may bring one 8-1/2 x 11 sheet of paper with your own notes on it, a photocopy of the table of distributions from your textbook, and a calculator.