## 1. Statistics

- a. Basics:
  - i. Normal and standard normal (+ using table) [2004 #1]
  - ii. Mean, variance, covariance (+ associated rules) [2009 #1]
- b. Confidence Intervals for a continuous variable [2007 #3, 2008 #1]
- c. CI for a binary variable [2003 #3, 2007 #6]
- d. Hypothesis testing
  - i. for the mean of a population [2008#2]
  - ii. for differences in means [2009#2, 2007#4]

## 2. Regression

- a. Population model:
  - i. What's in u?
  - ii. Omitted variable bias (+ expected direction) [2009 #5b, 2004#4b]
  - iii. Interpretation of population parameter  $\beta$  [2003 #5i, 2008 #4a]
- b. Sample regression:
  - i. Functional forms [2007 #1]
  - ii. R-squared (meaning and formula) [2006 #5, 2009#3]
  - iii. Interpretation of estimated parameter  $\hat{\beta}$  [2009#5a, 2008#3a]
- c. SLR and MLR assumptions (what are they, what do they give you) [2004 #4a, 2007 #5]
- d. Which x-variables to include: does it affect y? is it correlated with other x's? is it collinear (or redundant)? [2008#5a, 2008 #3bc]
- 3. Regression statistical properties
  - a. Test statistics: t and F: when are they used, know how to read the tables
  - b. p-value: definition [2009#4]
  - c. CI for beta [2009#6b]
  - d. Testing a hypothesis about beta=0 [2003 #5iii]
  - e. Testing a hypothesis about beta=another value [2008 #4c, 2009#6c]
  - f. F-test [2008 #5b, 2009#6d]
  - g. Using results [2009#6a, 2008 #4b]