USING F-TESTS FOR DROPPING TERMS

I. First transform variables to try to get closer to the model assumptions for the F-test.

II. Use a "Sequential Analysis of Variance" table.
    In arc: under "Examine Submodels" on model menu.

III. Make choices based on other relevant criteria in addition to F-tests:

- What variables are dictated by the context/question being studied?

- Look at the scatterplot matrix – when possible, keep "clean" variables rather than "messy" ones.

- Also consider the quality of the data or the measure used in the variable.

- Regress on variables considered and look at p-values

- Consider the "weight" of a variable (coefficient times typical values)

- Keep easily gathered variables over less easily gathered ones if possible; similarly for easily changed versus not easily changed.

- Also consider Mallow's C statistic (More on this later) and possibly other model comparison methods (e.g., Akaike's Information Criterion – not covered in this course)

- Also consider other methods such as added variable plots (Sections 10.5 – 10.7 – not covered in this course)

IV. If at all possible, validate the model on a separate data set (which may be chosen by randomly dividing the initial data set) before using for inference. If this is not possible, remember that results need to be interpreted cautiously.