ECO 5350                                                          Prof. Tom Fomby
Introductory Econometrics                                         Spring 2011

## TOPICS TO CONSIDER
## FOR FINAL EXAM

**The Final Exam in this class is scheduled for Friday, May 6, 8:00 – 11:00 AM in Room 303 Lee.** Don't spend a whole lot of time memorizing formulas. For the exam I will make available to you the formulas on the front and back covers of your Hill, et. al. textbook. Given that we will not have access to a computer during the test you should review up on how to determine critical values for hypothesis tests directly from statistical tables like the Z, t, and F tables. You should commit to memory the ANOVA table I presented in class. **You may bring your own calculator to the exam** but you are not allowed to use it for any access to notes, my website, or any other material that might assist you. If you do use your calculator in such a way, you will be subject to the penalties laid out in the SMU Honor Code.

In terms of other hints I would suggest that you go over the Mid-term review document that is posted on the class website and the Mid-term Exam Key. The final exam is cumulative (approximately 60% since mid-term and 40% on the mid-term material) so that you will need to review all previous material. Since the mid-term we have covered Exercises 6, 7, 8, and 9. See the course website for the keys to these exercises. You should also review all of the QQs given in the course. See the course website for the keys.

Since the last mid-term we have covered:
- Qualitative dependent and explanatory variables, the Chow test for structural difference, additive and multiplicative dummy variables, the interpretation of marginal effects when the regression model has interactive and quadratic terms, and the linear probability model (Chapter 7)
- Heteroskedasticity, its effects on least squares estimates, using residual plots to diagnose heteroskedasticity, tests for heteroscedasticity like the White's test, transforming a heteroskedasticity regression equation to an equation with homoscedastic errors and then running OLS (i.e. Weighted Least Squares), Aitken's Theorem, White's heteroskedasticity-robust standard errors and t-statistics for the OLS estimates (Chapter 8)
- Multiple Regression on time series, the phenomenon of spurious regression, stationary versus non-stationary time series, random walks without and with drift, Augmented Dickey-Fuller tests for unit roots, building a dynamically complete multiple time series regression, the Box-Pierce-Ljung Q test for white noise residuals, dynamic multipliers, total multiplier, pulse versus step changes in an exogenous (independent variable) and their effects on the dependent variable in an autoregressive distributed (ARDL) model. See the SAS programs spurious.sas, spurious2.sas, and spurious3.sas for additional discussion of the spurious regression problem. (Especially see the notes in the programs.) For the prototypical estimation of a time series model see the EVIEWS file csi_a_new.wf1 and for the dynamic multipliers see the SAS programs Dynamic.sas and

Dynamic_csi_new.sas.  I presented all of these programs in the last two class periods. See the file on **Time Series Regression Notes.pdf** for a discussion of these topics as well as Chapter 9 and the first part of Chapter 12 for more discussion of these topics.

- We will not be covering the topic of cointegration, Section XIII in the course outline. Sorry we just didn't have the time to get into this very interesting topic.  Blame the snow days!