ECONOMETRICS I  
Reading List

Texts:
Wooldridge, J. M., Econometric Analysis of Cross Section and Panel Data (MIT Press.)  
Greene, W. H., Econometric Analysis (Prentice Hall, 1999). (Make sure you buy the fifth  
edition from the COOP.)

Other Useful References (on reserve at Dewey):
Econometrica, JPE articles:  See www.jstor.org/journals/>

Students should be prepared in linear algebra at the level of 14.102 or equivalent. They  
should also know mathematical statistics at the level of 14.381 or equivalent (Chapter 1-12  
in Mood and Graybill). A good short summary is found in Graybill, Linear Statistical  
Models, Chapters 1-3. Course requirements include completion of about six problem  
sets, a midterm, and a final exam. No term paper is required.
1. Introduction: The Methods and Applications of Econometrics (0.5 weeks):
   Ruud, pp. 1-2
   Handbook, ch. 3

2. Multiple Regression, the Linear Statistical Model, Tests of Hypothesis (3 weeks):
   Greene, ch. 2-4, 6-8
   Wooldridge, 4.1
   Ruud, ch. 6, 8-9, 11, 17.2
   Amemiya, ch. 1
   Berndt, ch. 4

3. Large Sample Statistical Theory: Consistency, Asymptotic Normality, and Efficiency (1 week):
   Wooldridge, 4.2.1, 4.2.2, ch. 3
   Greene, ch. Appendix D, ch. 5.1-5.3, 17.4-17.6
   Ruud, 13.4, 15.2-15.5, 17.3
   Newey, W., “Asymptotic Theory of Least Squares”

4. Heteroskedasticity, Autocorrelation, and Robust Variance Estimation (1 week):
   Green, ch. 10.1-10.3, 11.1-11.2, 12.1-12.5
   Wooldridge, 4.2.3
   Ruud, ch. 18.2-18.4, 19.2-19.5


5. **Review and Midterm Exam (1 week)**

6. **Generalized Least Squares, Heteroskedasticity and Serial Correlation (2 weeks):**
   
   Wooldridge, 11.3, 11.4, 12, 13
   
   Greene, ch. 10,11, 12
   
   Ruud, ch. 18.5, 19.6
   
   Amemiya, pp. 181-196, 198-207

7. **Nonorthogonality of Regressors and Errors: Correlation Between Regressors and Errors, Errors in Variables, Instrumental Variables and Specification Tests (1.5 weeks).**

   Wooldridge, 4.3, 4.4, 5, 6.2
   
   Greene, ch. 5.4-5.7, 15.1-15.5
   
   Ruud, ch. 20
   
   
   
   Handbook, ch. 23
   

8. **Panel Data (1 week):**

   Wooldridge, ch. 10
   
   Greene, ch. 13
   
   Ruud, ch. 24


Amemiya, pp. 207-218

Handbook, ch. 22

9. **Nonlinear Specifications, Limited Dependent Variables and Maximum Likelihood Estimation (1.5 weeks):**

   Wooldridge, ch. 15, 16, 20

   Greene, ch. 9, 21, 22

   Ruud, ch. 27-28

   Amemiya, pp. 127-135, 141-146, 105-127


   Berndt, ch. 11