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Economics 681 Course Outline

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Prerequisites. Students entering 681 should be comfortable with matrix algebra (at the level covered in Economics 480/580) and have a background in statistics, in particular the topics covered in Chapter 2 of the text. You may find this chapter an adequate review if you have had a previous course covering these topics. We will not cover any of these prerequisites in lectures.

Additional references:

Statistics
- Kmenta, Chapters 1-6
- Beals, Statistics for Economists
- Hoel, Introduction to Mathematical Statistics, Wiley
- Wonnacott & Wonnacott, Introductory Statistics, Wiley

Matrix Algebra

Topics and Readings

I. Two variables regression
   P & R, chapters 1 and 3

II. Multiple Regression
   P & R chapters 4 and 5

III. Estimation problems (multicollinearity, autocorrelation, heteroscedasticity, simultaneity). P & R, chapters 6 and 7

MIDTERM EXAMINATION

IV. Extensions of the Basic Regression Model (Distributed lags, functional forms, pooling dummy variables, logit-probit models). P & R chapters 9 and 10

V. Simultaneous Equations Models
   P & R chapter 11

Assignments

Your grade will be based on one midterm (20%), a final (30%), an applied econometrics project (30%) and several laboratory experiments (20%). The final will consist of a mandatory part and an optional part, the latter to substitute for unsatisfactory performances on the midterm. The laboratory experiments are designed to provide experience with computing and encounters with typical applied econometrics problems. These will be evaluated on a satisfactory/unsatisfactory basis. The applied project is to be of the form you find in empirical studies in the economics literature: presentation of a theoretical model, discussion of related literature, description of data, presentation of estimated model, interpretation of results, comparison with previous studies, and conclusion. Numerous examples of such studies are found in the Review of Economics and Statistics. You should include any computer output with your paper for my reference. Materials necessary for the implementation of the computer programs and Laboratory experiments will be on file at Kinko's. Late assignments are penalized 10 percentage points.