Queen's University
Department of Economics

ECONOMICS 351A
INTRODUCTORY ECONOMETRICS

Winter Term 2006

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Course Meetings: Monday from 2:30-4:00 PM and Thursday from 4:00-5:30 PM. All meetings will be held in Botterall B143 unless otherwise stated.

Course Overview:

The purpose of this course is to provide an introduction to the theory of econometrics and the application of econometric methods. This course will cover the basic tools of estimation and inference in the context of the single-equation linear regression model and deals primarily with least squares methods of estimation. The course first introduces least squares estimation in the simple linear regression model. The principles of least squares estimation are subsequently extended to the multiple regression framework and the testing of hypotheses is considered. Finally, the course covers various issues that arise in empirical applications such as multicollinearity, specification errors, heteroskedasticity and data problems.

It is assumed that students have successfully completed an introductory statistics course such as ECON 250*, and an introductory university-level calculus course such as MATH 126 or MATH 121.

Course Format:

The course is based on two 80-minute lectures per week. In addition, hands-on tutorials are scheduled during the term at times to be arranged shortly. The tutorials are designed to familiarize students with those features of the statistical software program STATA they will require to complete the assignments in the course.

Assignments, to be completed in groups of no more than four students, will be assigned periodically throughout the term. The assignments will have a 'theory' and an 'applied' component. The latter will require students to perform various econometric exercises using the econometric software program STATA. Both PC and server versions of STATA are available. Students with their own PCs may wish to acquire a PC version of STATA suitable to their hardware. Other students will have to become familiar with how to use STATA on the Queen's PCs located in the Economics Department Computer Classroom in Dunning 350 and in the ECOBUS semi-public computing site in MC B305.

A mid-term test will be administered at approximately the mid-point of the semester during a regular class period. A three-hour final examination will be given in December during the Fall Term examination period and will cover the entire term's work.

Grades:

Assignments	25%
Mid-term Test	25%
Final Examination	50%

Readings:

The required textbook for this course is the following:

Wooldridge, Jeffrey. *Introductory Econometrics: A Modern Approach.* Second Edition. South-Western College Publishing, 2003.

Copies of the text can be purchased in the Campus Bookstore. Students should purchase the textbook for this course and are strongly encouraged to read the assigned readings for each class prior to the day of the lecture. This will make the lectures far more useful and productive. Copies of the workbook companion to the text are also available. **The workbook is recommended, although not required, for the course.**

Software:

The required econometric software package for this course is STATA. The current release of STATA for Windows is Release 9.

Hard copy documentation for *Stata for Windows Release 9* consists of three manuals:

- Getting Started with Stata for Windows
- Stata User's Guide
- Stata Reference Manual (4 volumes)

The first two manuals are particularly useful for new users. A copy of the 4-volume Stata Reference Manual will be on reserve in the Stauffer Library Reserve Room for either Release 8 or 9 (either is sufficient for this course).

Course Outline and Readings:

Section 1: The Simple Regression Model (Wooldridge, Chapter 2)

Section 2: The Multiple Regression Model

- Estimation (Wooldridge, Chapter 3)
- Inference (Wooldridge, Chapter 4)

Section 3: Further Issues in the Multiple Regression Model (Wooldridge, Chapter 6)

Section 4: Multiple Regression with Qualitative Information (Wooldridge, Chapter 7)

Section 5: Heteroskedasticity (Wooldridge, Chapter 8)

Section 6: Specification and Data Problems (Wooldridge, Chapter 9)