TEXT: W. Greene, *Econometric Analysis*, Sixth Edition. Note: The chapter numbering below refers to this edition. However, earlier additions will be fine for this course. We will supplement this text with handouts and assigned published papers.

GRADING (Modified Curve):

- Problem Sets: 20%
- Interim Exam: 15%
- Midterm Exam: 30%
- Final Exam: 35%

**Remark 1:** The problem sets will directly count for 20% of your grade. In making this calculation, the two problem sets with the lowest scores will be discarded. You are encouraged to work together on the assignments, but please provide your own write-up and be sure that you understand how to do the problems. A large fraction (about 80%) of each exam will include questions that are similar (though not identical) to those covered in problem sets. Consequently, it is essential that you understand how to do these problems. **You may and are encouraged to ask questions before you turn in the problem sets. A key to doing well in this course is to ask questions both in and outside of class.**

**Remark 2:** Exams will be open-book and open notes. Approximately 80% of each exam will cover problems similar to those done in problem sets.
OFFICE HOURS: At times to be announced, Room 311, New Jersey Hall, CAC (Corner Office). We will select a time when most if not all of you are free. If you do have questions, it is important for you to ask them. If you are unable to come at the announced times, email or call me and we will arrange a time:

Email: Klein@economics.rutgers.edu.
Phone: (732) 932 7543

Since each topic covered depends on previously covered material, I strongly encourage you to ask questions as we go along; do not wait until just before exams. As stated above, I encourage you to ask any questions that you may have about problem sets before they are due.

RECITATION SESSION, Thurs 1:10-2:30, Scott 103: There will be a recitation session to go over problems and questions not covered in class. Li Liu will run the recitation session at a time and place to be announced. I will occasionally do the recitation session to make up a regular missed class, cover optional material, or to review for exams.

COURSE OUTLINE

The following outline gives the topics that we will cover and the approximate dates for each topic. This outline is tentative in that we may spend more or less time on some topics than is indicated below. There will be several additional lectures given outside of the regularly scheduled course times.

There are many edition of Greene’s book, any of which would be fine for this course. If you do not have the current edition, some of the chapter numbers below may be different in your book. However, the topics covered will be the same, and you only need
to find the chapter covering the stated topic. The chapter and section numbers below refer to the fifth edition.

**REVIEW: PROGRAMMING, CONDITIONING, AND CONVERGENCE:** Jan 21, 22 (During Rec. Time), 26.

**MULTIPLE LINEAR REGRESSION:** Jan 28, Feb. 2, 4, 9, Feb. 9, 11.

- Estimation: Greene, Chapters 2-4.4.
- Inference: Handout and Greene, Chapter 4.5-4.7 and 5.1-5.4.

**DUMMY VARIABLES AND VARIABLE MARGINAL EFFECTS**

Feb. 12 (Rec. Session Time)

- Greene, Chapter 6.1-6.4.4
- Handout.

**Interm Exam:** February 16

**Remark:** No Class on Wed., Feb. 18

**Rec. Section on Feb. 19**

**NONLINEAR LEAST SQUARES:** Feb. 23, 25

- Greene: Chapter 11
- Handout

**PROBIT AND CATEGORICAL MODELS:** Extra Class (time to be announced), March 2, 4

- Handouts.
REVIEW SESSION: On March 5, review problems will be distributed for studying for the midterm exam. We will begin reviewing these problems in class on March 9. I suggest that we have an additional review session, scheduled outside of regular class time, to go over these problems. We will vote on a time later.

MIDTERM EXAM: March 11

SPRING BREAK: March 16-20

CORRELATION BETWEEN ERRORS & REGRESSORS:

• SIMULTANEOUS EQUATIONS  (March 23, 25, 30, April 1)
  Greene, Selection portions of Chapters 12-13.
  Handouts

ESTIMATORS: CONTROL, IV, 2SLS.

Handout

THE GMM ESTIMATOR.

Handout

• CENSORED REGRESSION AND SAMPLE SELECTION: April 6, 8
  Handout
  Greene, Chapter 24
HETEROSCEDASTICITY: April 13, 15, 20, 22, 27

- TESTING FOR HETEROSCEDASTICITY

- CORRECTING FOR HETEROSCEDASTICITY
  Greene, Chapter 8
  Handout

- A SEMIPARAMETRIC MODEL
  Handout

DEPENDENT DATA AND PANEL MODELS: April 29, May 4

Greene, Selected material from Chapters 9 and 19.

FINAL REVIEW SESSION (TO BE SCHEDULED)

FINAL EXAM (TO BE SCHEDULED)