

Graduate Statistics Minor

for Doctoral Students in the Behavioral and Social Sciences and in the Professional Schools

August 2006

The graduate statistics minor is an interdepartmental program for doctoral candidates in the Economics, Psychology and Sociology Departments of the Graduate School of Arts and Sciences and in the professional schools.

Students are required to take six courses beyond the basic statistics requirements for their discipline. Requirements for the minor include

- (1) One course in applied mathematics and
- (2) Five courses in statistics at the intermediate or advanced level, with at least one course at the advanced level.

The applied mathematics requirement can be fulfilled with EC720 (Mathematics for Economics) or MT580 (Mathematics for Statistics). Course descriptions for these two courses are given on the next page.

Students will choose the remaining five courses for the minor in consultation with their faculty advisor and/or graduate program director.

Where appropriate, courses taken for the minor may also be used to fulfill doctoral program requirements. Note that the registrar has set aside the code of 800 for the graduate statistics minor for students in GSAS, GSSW, GSOE and GSON.

Current disciplinary contacts are:

- (1) Kit Baum (Economics)
- (2) Hiram Brownell (Psychology)
- (3) Natasha Sarkisian and John Williamson (Sociology)
- (4) Ce Shen (GSSW)
- (5) Larry Ludlow (LSOE)
- (6) Anne Norris (CSON)
- (7) Sam Graves (CSOM)

prepared by:
Jenny Baglivo
Mathematics Dept,
Oversight Committee

EC 720 Mathematics for Economists (Fall: 3)

This course consists of two modules: one on linear algebra and the second on economic dynamics. The linear algebra portion of the course covers fundamental material in vector spaces, metric spaces, linear equations and matrices, determinants, and linear algebra. This basic material finds application in numerous economics courses, including macro theory, micro theory, and econometrics, and it will be assumed in the theoretical econometrics sequence. The dynamic optimization portion of the course covers differential equations, difference equations, and various topics in dynamic optimization.

Peter Ireland

David Belsley

Fall 2006/2007: Tu-Th 1:30-3:20pm

MT 580 Mathematics for Statistics (Fall: 3)

This course is an introduction to probability, discrete and continuous methods, and linear algebra for graduate students in applied statistics with little or no formal training in these subjects. Topics include: counting methods, axioms and properties of probability, conditional probability, independence, Bayes rule, limits, infinite series, derivative and integral methods, vector and matrix operations, and computer methods. Applications in statistics will be emphasized throughout the course.

Jenny Baglivo

Fall 2006/2007: Tu-Th 12:00-1:20pm