ECONOMICS 620
FOUNDATIONS OF ECONOMETRICS

Summer 2021

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Office Hours: M-Th 2:30-3:00

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Overview
This course is intended to provide graduate students in economics and related disciplines with a background and foundations in probability and mathematical statistics needed for graduate study in econometrics. This course or its equivalent is a prerequisite for ECN 621. Topics covered will include the basic laws of probability, density and distribution functions, moment-generating and characteristic functions, sampling theory, estimation techniques, hypothesis testing and confidence interval construction.

This is a highly theoretical course and presupposes a working knowledge of calculus, including differentiation, integration, differentials and limit theory. If it has been a while since you have taken a calculus course or used calculus, it is highly recommended that you do some review of this material prior to the start of class.

Texts
Recommended:

- *Probability and Statistics*, DeGroot and Schervish, Addison Wesley.

Students are encouraged to read other mathematical statistics texts to complement the required one. I cannot emphasize this enough! There is no text book that can cover **every** topic in statistics well, so read as many as you can! The library has hundreds of math-stat texts, so go grab a handful and read them.

Homework
In order to master the material presented in class it will be necessary to solve many problems. There will be weekly assignments which will be graded and will count toward 30% of your final grade. Some of these problems will be from the text; others will not. Students are encouraged to attempt as many problems as they can and should not limit themselves to those that are assigned or that are in the required text.

Exams
There will be one midterm exam worth 35% of your final grade. The final exam will also be worth 35%. Exam dates to be announced.