



Penn Arts & Sciences  
Department of Economics  
UNIVERSITY of PENNSYLVANIA

Ronald O. Perelman Center for Political Science and Economics  
Department of Economics  
133 S. 36<sup>th</sup> Street, Suite 150  
Philadelphia, PA 19104-6297  
Tel. 215.898.7701  
<https://economics.sas.upenn.edu>

March 2023

Dear Incoming Graduate Students:

I am very pleased to welcome you to our Ph.D. program and to the University of Pennsylvania. Our program is a rigorous one and to help ensure a strong start this September you should give immediate thought to several issues.

I. Mathematics

Proficiency in real analysis, calculus, and linear algebra is essential for success in the program, as well as required. There are two ways of demonstrating this proficiency:

- A. The passing of a waiver exam in mathematics. This exam is given before the beginning of the fall semester. This year, the Economics 897 waiver exam is scheduled for Monday, August 21, 2023, at 1:00PM ; or
- B. Successfully completing this course in mathematics. Students who do not have sufficient background in analysis and linear algebra should consider this to be a required course.  
Economics 897—is a concentrated six week non-credit course offered from July 10 to August 18, 2023, during our “Summer Math Institute”. A detailed discussion of this course can be found in the material posted on the web. The final examination in the course also serves as the waiver exam for the course.

Economics 897 is given in the summer, and the waiver exam is given at the end of this course (pass/fail), on August 21, 2023. Therefore, if a student chooses not to take the summer course and then fails the waiver exam on August 21st, the student is in some difficulty. Such a student may have to withdraw from the program for a year and begin again with sufficient mathematical proficiency in August 2023. If the student's performance indicates that he/she is very close to satisfying the proficiency requirement, the graduate chair may permit him/her to proceed, and work on the remedial math on his/her own. This is, however, a difficult option. You are urged to study the material listed on the web for mathematics prerequisites carefully, and participate in 897 offered during the summer if you are in any doubt about this issue.

II. Statistics Econometrics

The program for first year Ph.D. students in economics is designed primarily to provide rigorous training in economic theory and econometrics. The statistics econometrics part of this program is covered by two courses, Economics 7300 and 7310. Economics 7300 is offered during the fall term and 7310 is offered during the spring term. Note that Economics 7300 assumes knowledge of basic probability. Details can be found on the web, concerning mathematics prerequisites for the Ph.D. program.

III. Economic Theory

Economic Theory is covered by four courses during the first year, Economics 7100, 7200, 7110, and 7210.

IV. Registration and Procedures

Fall classes will begin on Tuesday, August 29th. The Graduate Group in Economics will hold an orientation meeting – time and location will be announced by email in August. Individual advising appointments with Professor David Dillenberger, the Director of Graduate Studies, will be available to you during the first week of the semester. If you have any further questions, please let us know. Once again, welcome to the Graduate program in Economics at the University of Pennsylvania.

Sincerely,

David Dillenberger  
Director of Graduate Studies