

## **Math Course Recommendations for Students Considering a Ph.D. in Economics**

Below is a list of recommended math courses for undergraduate students interested in applying to Ph.D. programs in economics.

### **Essential Courses**

MATH 10550 Calculus I  
MATH 10560 Calculus II  
MATH 20550 Calculus III  
MATH 20610 Linear Algebra  
MATH 20630 Introduction to Mathematical Reasoning  
MATH 20750 Ordinary Differential Equations  
MATH 30750 Real Analysis

NOTE:

- 1) The linear algebra & differential equations sequence (20610-20750) may be substituted with MATH 20580 (Introduction to Linear Algebra & Differential Equations) and MATH 30650 (Differential Equations), but this track is for engineers and is not proof-based, so it is not as good a preparation for real analysis.
- 2) Students with very strong math backgrounds (i.e. honors math students) may consider skipping MATH 20630 (Introduction to Mathematical Reasoning) before taking MATH 30750 (Real Analysis)

### **Other Courses**

MATH 30440 Probability and Statistics (the probability/statistics class for engineering and science majors)  
MATH 30530 Introduction to Probability (this, together with MATH 30540, forms the probability sequence for math majors)  
MATH 40750 Partial Differential Equations  
MATH 40570 Mathematical Methods for Financial Economics  
MATH 40390 Numerical Analysis

You are strongly encouraged to consult members of the economics faculty for advice on the most appropriate sequence of courses for you.