

Math and Graduate 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 20580 Introduction to Linear Algebra & Differential Equations

MATH 20630 Introduction to Mathematical Reasoning

MATH 30650 Differential Equations

MATH 30750 Real Analysis

NOTE:

1) The linear algebra & differential equations sequence (20580-30650) may be substituted with MATH20610 (Linear Algebra) and MATH 20750 (Ordinary Differential Equations). The former sequence is more typical for science and engineering majors, while the latter sequence is required for math majors.

2) Students with strong math backgrounds 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 and Math 30540 Mathematical Statistics (the probability sequence for math majors)

MATH 40750 Partial Differential Equations

MATH 40570 Mathematical Methods for Financial Economics

MATH 40390 Numerical Analysis

Students interested in pursuing a Ph.D. in economics may also want to consider taking some of the first-year graduate economics courses offered in the Department of Economics and Econometrics:

ECOE 60001(2) Mathematics for Economists I(II)

ECOE 60101(2) Microeconomic Theory I(II)

ECOE 60201(2) Macroeconomic Theory I(II)

ECOE 60301 Probability and Statistics

ECOE 60302 Econometrics I

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