Progress Toward Completion of the Mathematics Major

Economics Concentration

Arts and Sciences students may be admitted to the math major after successfully completing a semester of multivariable calculus, a semester of linear algebra, and a 3- or 4-credit computer programming course. To apply, visit math.cornell.edu/major.

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<th>Student's Name</th>
<th>Net ID</th>
<th>Faculty Advisor</th>
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Courses needed to complete the major

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Math majors must complete 9 courses for the major, as described in items 1–3 below, with a minimum grade of C–. No course may be used to satisfy more than one requirement. MATH courses numbered between 4980 and 5999 do not count.

   At least two of the MATH courses taken must be at the 4000 level (or above).

1. Two Courses in Algebra. (___ transfer credit applied, see reverse)

   ____ MATH 3320 - Introduction to Number Theory
   ____ MATH 3340 - Abstract Algebra*
   ____ MATH 3360 - Applicable Algebra*
   ____ MATH 4310 - Linear Algebra*               Discontinued: ____ MATH 4315*
   ____ MATH 4330 - Honors Linear Algebra*
   ____ MATH 4340 - Honors Introduction to Algebra*
   ____ MATH 4370 - Computational Algebra
   ____ MATH 4500 - Matrix Groups
   ____ MATH 4560 - Geometry of Discrete Groups

2. Two Courses in Analysis. (___ transfer credit applied, see reverse)

   ____ MATH 3110 - Introduction to Analysis*
   ____ MATH 3210 - Manifolds & Differential Forms  Discontinued: ____ MATH 3230*
   ____ MATH 3270 - Introduction to Ordinary Differential Equations*
   ____ MATH 4130 - Honors Intro Analysis I*
   ____ MATH 4140 - Honors Intro Analysis II
   ____ MATH 4180 - Complex Analysis*
   ____ MATH 4200 - Differential Equations and Dynamical Systems*
   ____ MATH 4210 - Nonlinear Dynamics and Chaos*
   ____ MATH 4220 - Applied Complex Analysis*
   ____ MATH 4250 - Numerical Analysis and Differential Equations [also CS 4210]
   ____ MATH 4260 - Numerical Analysis: Linear & Nonlinear Problems [also CS 4220]
   ____ MATH 4280 - Introduction to Partial Differential Equations*

*See course descriptions at math.cornell.edu/upper-level-courses for information on forbidden overlaps.
3. Concentration in Economics. (___ transfer credit applied, see below)

Five additional courses from (vii), (viii) and (ix) below.

(vii) At least one MATH course numbered 3000 or above:


(viii) At least three ECON courses with significant mathematical content.

___ ECON 3130 - Statistics and Probability* or ECON 6190 - Econometrics I
___ ECON 3140 - Econometrics or ECON 6200 - Econometrics II
___ ECON 3810 - Decision Theory I
___ ECON 3825 - Networks II: Market Design [also CS 4852, INFO 4220]
___ ECON 4020 - Game Theory I
___ ECON 4022 - Game Theory II
___ ECON 4110 - Cross Section and Panel Econometrics
___ ECON 4130 - Statistical Decision Theory
___ ECON 4907 - The Economics of Asymmetric Information and Contracts
___ ECON 6090 - Microeconomic Theory I
___ ECON 6100 - Microeconomic Theory II
___ ECON 6130 - Macroeconomics I
___ ECON 6140 - Macroeconomics II

Note: Undergraduate enrollment in ECON graduate courses requires permission of instructor.

(ix) Courses in ORIE with significant mathematical content dealing with material of interest in economics.

___ ORIE 3300 - Optimization I
___ ORIE 3310 - Optimization II
___ ORIE 4350 - Introduction to Game Theory
___ ORIE 4580 - Simulation Modeling and Analysis
___ ORIE 4600 - Introduction to Financial Engineering
___ ORIE 4740 - Statistical Data Mining I
___ ORIE 4741 - Learning with Big Messy Data
___ ORIE 5600 - Financial Engineering with Stochastic Calculus I
___ ORIE 5610 - Financial Engineering with Stochastic Calculus II

[____________________________________________________ (approved by faculty advisor)]

Transfer Credit / Study Abroad Courses Applied to the Major

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<th>Course Number &amp; Title</th>
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