Progress Toward Completion of the Mathematics Major

Mathematics 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 Mathematics. ( ___ transfer credit applied, see below)

(i) Four additional MATH course numbered 3000 or above:

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At least one of the four courses must be among the geometry/topology courses. Eligible courses include: MATH 3210, 4500, 4520, 4530, 4540, 4550, 4560.

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Note: MATH 3210 is eligible only if not used for the analysis requirement; MATH 4500 and MATH 4560 are eligible only if not used toward the algebra requirement.

(ii) One course dealing with mathematical models. Eligible courses include MATH 3610 and any course outside mathematics with serious mathematical content that deals with scientific matters. Serious mathematical content includes, but is not limited to, extensive use of calculus or linear algebra. Any course from another department that would satisfy one of the other concentrations may be used.

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Or one of the following may be used:

____ CS 2110 - Object-Oriented Programming and Data Structures [also ENGRD 2110]
____ PHYS 1116 - Physics I: Mechanics and Special Relativity
____ PHYS 2208 - Fundamentals of Physics II
____ PHYS 2213 - Physics II: Electromagnetism
____ PHYS 2217 - Physics II: Electricity and Magnetism [also AEP 2170]

Other 1000-level physics course and PHYS 2207 may not be used. AP credit may not be used.

Transfer Credit / Study Abroad Courses Applied to the Major

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