# Mathematics Major

## Requirements

Eleven courses beyond Calculus 1 and Calculus 2 are required to receive the Bachelor of Arts in mathematics.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1700</td>
<td>Mathematical Modelling</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2001</td>
<td>Discrete Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2004</td>
<td>Multivariable Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2006</td>
<td>Linear Algebra I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 3005</td>
<td>Abstract Algebra I</td>
<td>4</td>
</tr>
</tbody>
</table>

### Concentration

Select one of the following concentrations: 16

- **Pure Mathematics Concentration**
  - MATH 3001 Linear Algebra II
  - MATH 3003 Real Analysis
  - MATH 3004 Complex Analysis
  - MATH 4009 Topics in Geometry

- **Applied Mathematics Concentration**
  - MATH 3002 Differential Equations
  - MATH 3006 Probability
  - MATH 3007 Statistics
  - MATH 4006 Numerical Analysis

### Electives

Select two electives. Must be four credit MATH courses numbered 2000 or higher.

1. Any course with the MATH subject code may fulfill this requirement.

## Additional Information

To graduate with a mathematics major, a student must have a cumulative grade point average of at least 2.0 in all courses in the major.

We strongly recommend that mathematics majors or minors take CISC 1600 Computer Science I as early as their schedules allow.

Prospective mathematics majors should consult with the chair before constructing a plan of study.

## Bachelor of Science degree

The above courses are required to receive the degree of Bachelor of Arts in mathematics. To receive the Bachelor of Science degree, students must also complete two of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1601</td>
<td>Introduction to Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1602</td>
<td>Introduction to Physics II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS/NSCI 1701</td>
<td>Physics I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS/NSCI 1702</td>
<td>Physics II</td>
<td>3</td>
</tr>
<tr>
<td>CISC 1600</td>
<td>Computer Science I</td>
<td>3</td>
</tr>
<tr>
<td>CISC 2000</td>
<td>Computer Science II</td>
<td>3</td>
</tr>
<tr>
<td>CISC 2200</td>
<td>Data Structures</td>
<td>4</td>
</tr>
</tbody>
</table>

### Availability

The major in mathematics is available at Fordham College at Rose Hill and Fordham College at Lincoln Center. Students in Fordham’s School of Professional and Continuing Studies may major in mathematics only if they receive the approval of their advising dean and/or department, and their schedules are sufficiently flexible to permit them to take day courses at the Rose Hill or Lincoln Center campuses.

**Fordham College at Rose Hill students:** The requirements above are in addition to those of the Core Curriculum.

**Fordham College at Lincoln Center students:** The requirements above are in addition to those of the Core Curriculum.

**Professional and Continuing Studies students:** The requirements above are in addition to those of the PCS Core Curriculum and any additional electives that may be required to earn a minimum of 124 credits.

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*Updated: 10-25-2023*