MATHEMATICS (COURSE 18)

Bachelor of Science in Mathematics
(Pure Mathematics Option)

General Institute Requirements (GIRs)
The General Institute Requirements include a Communication
Requirement that is integrated into both the HASS Requirement and
the requirements of each major; see details below.

Summary of Subject Requirements

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Subjects</th>
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<tbody>
<tr>
<td>Science Requirement</td>
<td>6</td>
</tr>
<tr>
<td>Humanities, Arts, and Social Sciences (HASS)</td>
<td>8</td>
</tr>
<tr>
<td>Restricted Electives in Science and Technology (REST)</td>
<td>2</td>
</tr>
<tr>
<td>Laboratory Requirement (12 units)</td>
<td>1</td>
</tr>
</tbody>
</table>

Total GIR Subjects Required for SB Degree 17

Physical Education Requirement
Swimming requirement, plus four physical education courses for eight points.

Departmental Program
Choose at least two subjects in the major that are designated as communication-intensive (CI-M) to fulfill the Communication Requirement.

Required Subjects

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<tr>
<th>Units</th>
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<tr>
<td>12</td>
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Restricted Electives

Select one of the following:

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<tr>
<td>12</td>
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<td>12</td>
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<td>12</td>
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Select one undergraduate seminar from the following:

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<th>Units</th>
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<td>12</td>
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Departments (18)

18.03 Differential Equations
18.100B Real Analysis
18.701 Algebra I
18.702 Algebra II
18.901 Introduction to Topology

Units in Major

108

Unrestricted Electives

84

Units in Major That Also Satisfy the GIRs

(12)

Total Units Beyond the GIRs Required for SB Degree

180

The units for any subject that counts as one of the 17 GIR subjects cannot also be counted as units required beyond the GIRs.

1 Students may substitute one of the more advanced subjects 18.152 Introduction to Partial Differential Equations or 18.303 Linear Partial Differential Equations: Analysis and Numerics for 18.03. 18.032 Differential Equations, which places more emphasis on theory, is also an acceptable option.

2 Alternate versions of this subject, 18.100A, 18.100P and 18.100Q, also satisfy this requirement.

Communication-Intensive Subjects in the Major
To satisfy the requirement that students take two CI-M subjects, students must select one of the following options:

Option A
Select two of the following:

18.104 Seminar in Analysis
18.204 Undergraduate Seminar in Discrete Mathematics
18.384 Undergraduate Seminar in Physical Mathematics
18.424 Seminar in Information Theory
18.434 Seminar in Theoretical Computer Science
18.504 Seminar in Logic
18.704 Seminar in Algebra
18.784 Seminar in Number Theory
18.821 Project Laboratory in Mathematics
18.904 Seminar in Topology
18.994 Seminar in Geometry

Option B
Select one subject from Option A and one of the following:

8.06 Quantum Physics III
14.33 Research and Communication in Economics: Topics, Methods, and Implementation

18.100P Real Analysis
18.100Q Real Analysis
18.200 Principles of Discrete Applied Mathematics