MATHEMATICS (COURSE 18)

Department of Mathematics (*http://catalog.mit.edu/schools/science/mathematics/#undergraduatetext*)

Bachelor of Science in Mathematics (General 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	Subjects
Science Requirement	6
Humanities, Arts, and Social Sciences (HASS) Requirement; at least two of these subjects must be designated as communication-intensive (CI-H) to fulfill the Communication Requirement.	8
Restricted Electives in Science and Technology (REST) Requirement [one subject can be satisfied by 18.03 in the Departmental Program]	2
Laboratory Requirement (12 units)	1
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		Units
18.03	Differential Equations [1]	12
Restricted Electives		
Select eight 12-unit subjects of essentially different content, including at least six advanced subjects (first decimal digit one or higher) that are distributed over at least three distinct areas (at least three distinct first decimal digits). One of these eight subjects must be one of the following:		96
18.06	Linear Algebra	
18.C06[J]	Linear Algebra and Optimization	
18.700	Linear Algebra	
18.701	Algebra I	
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 also fulfill this requirement by completing 18.032 Differential Equations (which places more emphasis on theory), 18.152 Introduction to Partial Differential Equations, or 18.303 Linear Partial Differential Equations: Analysis and Numerics. Any subject substituted for 18.03 cannot also count towards the eight-subject Restricted Elective 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
14.18	Mathematical Economic Modeling
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