BIOLOGICAL ENGINEERING (COURSE 20)

Department of Biological Engineering (*http://catalog.mit.edu/schools/engineering/biological-engineering/#undergraduatetext*)

Bachelor of Science in Biological Engineering

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 [can be satisfied by 5.12 and 18.03 in the Departmental Program]	2
Laboratory Requirement (12 units) [can be satisfied by 20.109]	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 Core Subjects		Units
Tier I		
5.12	Organic Chemistry I	12
6.00	Introduction to Computer Science and Programming [1]	12
7.03	Genetics	12
18.03	Differential Equations	12
20.110[J]	Thermodynamics of Biomolecular Systems	12
Tier II		
5.07[J] or 7.05	Biological Chemistry I General Biochemistry	12
7.06	Cell Biology	12
20.109	Laboratory Fundamentals in Biological Engineering (CI-M)	15
20.309[J]	Instrumentation and Measurement for Biological Systems	12
20.320	Analysis of Biomolecular and Cellular Systems	12
Tier III		
20.330[J]	Fields, Forces and Flows in Biological Systems	12
20.380	Biological Engineering Design (CI-M)	12
Restricted Electives		
Tracks TBD		33-36
Units in Major		180-183
Unrestricted Electives		48
Units in Major That Also Satisfy the GIRs		(36)
Total Units Beyond the GIRs Required for SB Degree		192-195

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] Combination of 6.0001 Introduction to Computer Science Programming in Python and 6.0002 Introduction to Computational Thinking and Data Science is also acceptable.