

CHEMICAL-BIOLOGICAL ENGINEERING (COURSE 10-B)

Department of Chemical Engineering (<http://catalog.mit.edu/schools/engineering/chemical-engineering/#undergraduatetext>)

Bachelor of Science in Chemical-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 from among 5.07[] or 7.05, 5.12, 5.60, 7.03, 10.301, and 18.03 in the Departmental Program]	2
Laboratory Requirement (12 units) [can be satisfied by 10.702[]]	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
Foundational Subjects	
5.12 Organic Chemistry I	12
5.60 Thermodynamics and Kinetics	12
7.03 Genetics	12
10.10 Introduction to Chemical Engineering	12
10.702[] Introduction to Experimental Biology and Communication (CI-M)	18
18.03 Differential Equations ¹	12
Intermediate Subjects	
7.05 General Biochemistry	12
or 5.07[] Biological Chemistry I	
7.06 Cell Biology	12

10.213	Chemical and Biological Engineering Thermodynamics	12
10.301	Fluid Mechanics	12
10.302	Transport Processes	12
<i>Select one of the following:</i>		15
10.27	Energy Engineering Projects Laboratory (CI-M)	
10.28	Chemical-Biological Engineering Laboratory (CI-M)	
10.29	Biological Engineering Projects Laboratory (CI-M)	

Advanced Subjects

10.37	Chemical Kinetics and Reactor Design	9
10.490	Integrated Chemical Engineering I	8
10.491	Integrated Chemical Engineering II	8
<i>Select two of the following:</i>		8
10.492	Integrated Chemical Engineering Topics I	
10.493	Integrated Chemical Engineering Topics II	
10.494	Integrated Chemical Engineering Topics III	

Units in Major	186
Unrestricted Electives	48
Units in Major That Also Satisfy the GIRs	(36)
Total Units Beyond the GIRs Required for SB Degree	198

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 18.032 Differential Equations is also an acceptable option.