CHEMISTRY (COURSE 5)

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

Bachelor of Science in Chemistry

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 5.12, 5.60, or 5.61 in the Departmental Program]	2
Laboratory Requirement (12 units) [can be satisfied from among 5.351, 5.352, 5.353, and 5.363 in the Departmental Program]	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
5.03	Principles of Inorganic Chemistry I	12
5.07[J]	Biological Chemistry I	12
5.12	Organic Chemistry I	12
5.13	Organic Chemistry II	12
5.60	Thermodynamics and Kinetics	12
5.61	Physical Chemistry	12
Departmental Laboratory Requirement		
5.351	Fundamentals of Spectroscopy	4
5.352	Synthesis of Coordination Compounds and Kinetics	4
5.353	Late-stage Drug Modification and Selective Delivery	4
5.361	Expression and Purification of Enzyme Mutants	3
5.362	Kinetics of Enzyme Inhibition	5
5.363	Organic Structure Determination	4
5.371	Continuous Flow Chemistry: Sustainable Conversion of Reclaimed Vegetable Oil into Biodiesel	4
5.372	Chemistry of Renewable Energy	4
5.373	Dinitrogen Cleavage	4
5.381	Quantum Dots	3
5.382	Time- and Frequency-resolved Spectroscopy of Photosynthesis	5
5.383	Fast-flow Peptide and Protein Synthesis	4
Restricted Electives		
Select at least two of the following:		24
5.04	Principles of Inorganic Chemistry II	
5.08[J]	Biological Chemistry II	
5.43	Advanced Organic Chemistry	
5.62	Physical Chemistry	
Units in Major		144
Unrestricted Electives		60
Units in Major That Also Satisfy the GIRs		(24)
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.