COMPUTER SCIENCE AND MOLECULAR BIOLOGY (COURSE 6-7)

Computer Science and Molecular Biology (*http://catalog.mit.edu/interdisciplinary/undergraduate-programs/degrees/computer-science-molecular-biology*)

Bachelor of Science in Computer Science and Molecular Biology

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 6.042[J] in the Departmental Program]	2
Laboratory Requirement (12 units) [can be satisfied by 7.02[J] or 20.109 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
Mathematics and Introductory		
6.00	Introduction to Computer Science and Programming [1]	12
6.042[J]	Mathematics for Computer Science	12
Chemistry		
5.12	Organic Chemistry I	12
5.60	Thermodynamics and Kinetics	12
or 20.110[J]	Thermodynamics of Biomolecular Systems	
Introductory Laboratory		
Select one of the following:		15-18
7.02[J]	Introduction to Experimental Biology and Communication (CI-M)	

20.109	Laboratory Fundamentals in Biological Engineering (CI-M)	
Foundational Subjects		
Three Computer Science subjects:		
6.006	Introduction to Algorithms	12
6.009	Fundamentals of Programming	12
6.046[J]	Design and Analysis of Algorithms	12
Three Biological Science subjects:		
7.03	Genetics	12
7.05	General Biochemistry [2]	12
7.06	Cell Biology	12
Restricted Electives		
Computational Biology		
Select one of the following:		12
6.047	Computational Biology: Genomes, Networks, Evolution	
6.503	Foundations of Algorithms and Computational Techniques in Systems Biology	
6.802[J]	Foundations of Computational and Systems Biology	
Biology		
Select one subject from the list of Biology Restricted Electives		12
Advanced Undergraduate Project		
6.UAT	Oral Communication (CI-M) [3]	9
Units in Major		**168-171**
Unrestricted Electives		**48**
Units in Major That Also Satisfy the GIRs		(36)
Total Units Beyond the GIRs Required for SB Degree		180-183

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 who enter MIT with sufficient programming experience may substitute 6.031 Elements of Software Construction (15 units) after taking 6.009.

[2] 5.07[J] Biological Chemistry I is also an acceptable option.

[3] 6.UAR Seminar in Undergraduate Advanced Research is also an acceptable option.

Biology Restricted Electives

7.08[J]	Biological Chemistry II	12
7.20[J]	Human Physiology	12
7.21	Microbial Physiology	12
7.22	Developmental Biology	12
7.23	Immunology	12
7.26	Molecular Basis of Infectious Disease	12