

COMPUTER SCIENCE AND ENGINEERING (COURSE 6-3)

Department of Electrical Engineering and Computer Science (<https://catalog.mit.edu/schools/engineering/electrical-engineering-computer-science/#undergraduatestudytext>)

Bachelor of Science in Computer Science and 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 [two subjects can be satisfied by 6.3260[J] and 6.4590[J] (taken as part of a track) in the Departmental Program]; 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 6.1910 and 6.1200[J] (if taken under joint number 18.062[J]) in the Department Program]	2
Laboratory Requirement (12 units) [satisfied by 6.1010 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.

Departmental Requirements	Units
Computer Science Requirements	
Select 12 units of the following:	12
6.1000 Introduction to Programming and Computer Science	
6.100A Introduction to Computer Science & 6.100B Programming in Python and Introduction to Computational Thinking and Data Science	

6.100A & 16.C20[J]	Introduction to Computer Science Programming in Python and Introduction to Computational Science and Engineering	
6.1010	Fundamentals of Programming	12
6.1020	Software Construction	15
6.1200[J]	Mathematics for Computer Science	12
6.1210	Introduction to Algorithms	12
6.1400[J] or 6.1220[J]	Computability and Complexity Theory Design and Analysis of Algorithms	12
6.1800 or 6.1810 or 6.5831	Computer Systems Engineering (CI-M) ¹ Operating System Engineering Database Systems	12
6.1903	Introduction to Low-level Programming in C and Assembly	6
6.1910	Computation Structures	12
Select one of the following:		12
6.3700	Introduction to Probability	
6.3800	Introduction to Inference	
18.05	Introduction to Probability and Statistics	
18.06	Linear Algebra	
18.Co6[J]	Linear Algebra and Optimization	
Elective Subjects²		
Select two subjects from a Computer Science track ³		24
Select two subjects from a Computer Science, Artificial Intelligence + Decision Making, or Electrical Engineering track ³		24-30
Select one subject that satisfies a degree requirement in 6-3, 6-4, 6-5, or 18		12
Units in Major		177-183
Unrestricted Electives⁴		48-60
Units in Major That Also Satisfy the GIRs		(36-60)
Total Units Beyond the GIRs Required for SB Degree		180-198

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 See EECS CI-M (<https://catalog.mit.edu/degree-charts/eecs-subject-groupings/#cimtext>) list for additional subjects that can be used to complete the Communication Requirement.

² Out of the subjects taken for the Departmental Program, at least two must be from the list of Advanced Undergraduate Subjects (<https://catalog.mit.edu/degree-charts/eecs-subject-groupings/#advancedundergraduate2text>), and at least 12 units must be from the list of Artificial Intelligence Subjects (<https://catalog.mit.edu/degree-charts/electrical-engineering-computer-science-tracks/#artificialintelligencedecisionmakingtext>).

- ³ See EECS tracks (<https://catalog.mit.edu/degree-charts/electrical-engineering-computer-science-tracks/#computersciencetext>).
- ⁴ Students may need to adjust the number of unrestricted electives they take to stay within the 180-198 units beyond the GIRs range.