ELECTRICAL SCIENCE AND ENGINEERING (COURSE 6-1)

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

Bachelor of Science in Electrical 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] 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 [two subjects can be satisfied from among 18.03, 18.05, 18.600, and 6.1910, 6.2000, or 6.3000 in the Departmental Program]	2
Laboratory Requirement (12 units) [can be satisfied by 6.3400, 6.4900, 6.9010, or 6.9080 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
6.100A	Introduction to Computer Science Programming in Python	6-9
or 6.100L	Introduction to Computer Science and Programming	
18.03	Differential Equations	12
Electrical Engineering Requirements		
6.1910	Computation Structures	12
6.2000	Electrical Circuits: Modeling and Design of Physical Systems	12

6.3000	Signal Processing	12
Select three of the following:		36
6.2210	Electromagnetic Fields, Forces and Motion	
6.2300	Electromagnetics Waves and Applications	
6.2500	Nanoelectronics and Computing Systems	
6.3010	Signals, Systems and Inference	
6.3900	Introduction to Machine Learning	
6.4810[J]	Cellular Neurophysiology and Computing	
Elective Subjects [1]		
Select two subjects from the list of Advanced Undergraduate Subjects [2]		24-30
Select four subjects from the departmental list of EECS subjects [2]		48
Units in Major		**162-171**
Unrestricted Electives		**48-81**
Units in Major That Also Satisfy the GIRs		(36-60)
Total Units Beyond the GIRs Required for SB Degree		**183-189**

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]   Chosen electives must satisfy each of the following categories: Advanced Departmental Laboratory, Independent Inquiry, and Probability (*http://catalog.mit.edu/degree-charts/eecs-subject-groupings*). A subject may count toward more than one category.

[2]   See EECS Subject Groupings (*http://catalog.mit.edu/degree-charts/eecs-subject-groupings*) for a list of acceptable options.