ENGINEERING AS RECOMMENDED BY THE DEPARTMENT OF AERONAUTICS AND ASTRONAUTICS (COURSE 16-ENG)

Department of Aeronautics and Astronautics (*http://catalog.mit.edu/schools/engineering/aeronautics-astronautics/#undergraduatetext*)

Bachelor of Science in Engineering as Recommended by the Department of Aeronautics and Astronautics

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 6.00, 16.001, and 18.03 in the Departmental Program]	2
Laboratory Requirement (12 units) [can be satisfied by 16.405[J], 16.622, 16.821, or 16.831[J] 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 Core		Units
6.00	Introduction to Computer Science and Programming [1]	12
16.001	Unified Engineering: Materials and Structures	12
16.002	Unified Engineering: Signals and Systems	12
16.003	Unified Engineering: Fluid Dynamics	12
16.004	Unified Engineering: Thermodynamics	12
16.06 or 16.07	Principles of Automatic Control Dynamics	12
18.03	Differential Equations [2]	12
Concentration Subjects		
These electives define a concentrated area of study and must be chosen with the written approval of the AeroAstro Undergraduate Office. A minimum of 42 units of engineering topics and a minimum of 12 units of mathematics or science topics must be included in the 72 units of concentration electives. In all cases, the concentration subjects must be clearly related to the theme of the concentration. [3]		72
Laboratory and Capstone Subjects		
Select one of the following:		12
16.82	Flight Vehicle Engineering (CI-M)	
16.83[J]	Space Systems Engineering (CI-M)	
Select one of the following sequences:		12-18
Robotics		
16.405[J]	Robotics: Science and Systems (CI-M)	
Experimental Projects		
16.621	Experimental Projects I	
16.622	Experimental Projects II (CI-M)	
Flight Vehicle Development		
16.821	Flight Vehicle Development (CI-M)	
Space Systems Development		
16.831[J]	Space Systems Development (CI-M)	
Units in Major		180-186
Unrestrictive Electives		48
Units in Major That Also Satisfy the GIRs		(36)
Total Units Beyond the GIRs Required for SB Degree		192-198

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. *Combination of 6.0001 Introduction to Computer Science Programming in Python and 6.0002 Introduction to Computational Thinking and Data Science is also an acceptable option.*
2. *18.032 Differential Equations is also an acceptable option.*
3. *A list of approved subjects for each concentration, as well as additional information about the 16-ENG program, is available on the department's website (http://aeroastro.mit.edu/academics/undergraduate-program/degrees).*