GENERAL ENGINEERING (COURSE 1-ENG)

Department of Civil and Environmental Engineering (http://catalog.mit.edu/schools/engineering/civil-environmental-engineering/#undergraduatetext)

Bachelor of Science in General 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
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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 1.00 or 1.000, and 18.03 in the Departmental Program] | 2
Laboratory Requirement (12 units) [can be satisfied from among 1.101 and 1.102 or 1.106 and 1.107 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.

General Department Requirements (GDRs) | Units
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1.00 Engineering Computation and Data Science | 12
or 1.000 Computer Programming for Engineering Applications | 
1.010 Introduction to Probability and Statistics in Engineering | 12
1.013 Senior Civil and Environmental Engineering Design (CI-M) | 12
1.073 Introduction to Environmental Data Analysis | 6
or 1.074 Multivariate Data Analysis | 
18.03 Differential Equations | 12

Core Subjects

Select one area of core coursework 54-60

Environment

1.060A Fluid Mechanics I
1.061A Transport Processes in the Environment I
1.070A[J] Introduction to Hydrology and Water Resources
1.080A Environmental Chemistry I
1.092 Traveling Research Environmental eXperience (TREX): Fieldwork Analysis and Communication (CI-M)
1.089A Environmental Microbiology I
1.106 Environmental Fluid Transport Processes and Hydrology Laboratory
1.107 Environmental Chemistry and Biology Laboratory

Mechanics/Materials

1.035 Multiscale Characterization of Materials
1.050 Solid Mechanics
1.060A Fluid Mechanics I
1.036 Structural Mechanics and Design
1.101 Introduction to Civil and Environmental Engineering Design I
1.102 Introduction to Civil and Environmental Engineering Design II (CI-M)

Systems

1.020 Engineering Sustainability: Analysis and Design
1.022 Introduction to Network Models
1.041 Transportation Systems Modeling
1.075 Water Resource Systems
1.101 Introduction to Civil and Environmental Engineering Design I
1.102 Introduction to Civil and Environmental Engineering Design II (CI-M)

Elective Subjects with Engineering Content

Students are required to take four Restricted Electives selected from subjects offered within or outside CEE to form a coherent program of study under supervision by CEE faculty.

Units in Major | 168
Unrestricted Electives | 48-60
Units in Major That Also Satisfy the GIRs | (36)

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.