

ENGINEERING (COURSE 1-ENG)

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

Bachelor of Science in 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; 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 1.000 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
1.000 Introduction to Computer Programming and Numerical Methods for Engineering Applications	12
1.010A Probability: Concepts and Applications	6
1.013 Senior Civil and Environmental Engineering Design (CI-M) ¹	12
1.073 Introduction to Environmental Data Analysis	6
or 1.074 Multivariate Data Analysis	
1.101 Introduction to Civil and Environmental Engineering Design I	6

18.03 Differential Equations 12

Core Subjects

Select one area of core coursework 54-66

Environment

1.018[J] Fundamentals of Ecology

1.060 Fluid Mechanics

1.061A Transport Processes in the Environment I

1.070A[J] Introduction to Hydrology and Water Resources

1.080 Environmental Chemistry

1.091 Traveling Research Environmental eXperience (TRES): Fieldwork

1.106 Environmental Fluid Mechanics Lab

1.107 Environmental Chemistry Laboratory (CI-M)

Mechanics/Materials

1.035 Mechanics of Materials

1.036 Structural Mechanics and Design

1.050 Solid Mechanics

1.056[J] Introduction to Structural Design

1.060 Fluid Mechanics

1.102 Introduction to Civil and Environmental Engineering Design II (CI-M)

Systems

1.020 Modeling and Decision-Making for Sustainability

1.022 Introduction to Network Models

1.041[J] Transportation: Foundations and Methods

1.075 Water Resource Systems

1.102 Introduction to Civil and Environmental Engineering Design II (CI-M)

Elective Subjects with Engineering Content ²

Students are required to take at least four Restricted Electives selected from subjects offered within or outside CEE to form a coherent program of study under supervision by CEE faculty. 48-60

Units in Major 156-180

Unrestricted Electives ² 48-60

Units in Major That Also Satisfy the GIRs (36)

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.

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- ¹ *Students are expected to take 6-unit 1.013 twice.*
- ² *In order to reach the 180 units beyond the GIRs required, students may need to take more than 48 units of Restricted and/or Unrestricted Electives. Direct requests for more information to cee-apo@mit.edu.*