MECHANICAL ENGINEERING (COURSE 2)

Department of Mechanical Engineering (*http://catalog.mit.edu/schools/engineering/mechanical-engineering/#undergraduatetext*)

Bachelor of Science in Mechanical 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 2.001 and 18.03 in the Departmental Program]	2
Laboratory Requirement (12 units) [can be satisfied by 2.671 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.

Required Core Subjects		Units
2.001	Mechanics and Materials I	12
2.002	Mechanics and Materials II	12
2.003[J]	Dynamics and Control I	12
2.004	Dynamics and Control II	12
2.005	Thermal-Fluids Engineering I	12
2.006	Thermal-Fluids Engineering II	12
2.007	Design and Manufacturing I	12
or 2.017[J]	Design of Electromechanical Robotic Systems	
2.008	Design and Manufacturing II	12
2.009	The Product Engineering Process (CI-M) [1]	12
2.086	Numerical Computation for Mechanical Engineers	12
2.670	Mechanical Engineering Tools [2]	3
2.671	Measurement and Instrumentation (CI-M)	12
18.03	Differential Equations	12
2.THU	Undergraduate Thesis [3]	6
Restricted Electives		
Select two of the following: [2]		24
2.016	Hydrodynamics	
2.017[J]	Design of Electromechanical Robotic Systems	
2.019	Design of Ocean Systems (CI-M)	
2.050[J]	Nonlinear Dynamics: Chaos	
2.092	Finite Element Analysis of Solids and Fluids I	
2.12	Introduction to Robotics	
2.14	Analysis and Design of Feedback Control Systems	
2.184	Biomechanics and Neural Control of Movement	
2.370	Fundamentals of Nanoengineering	
2.51	Intermediate Heat and Mass Transfer	
2.60[J]	Fundamentals of Advanced Energy Conversion	
2.650[J]	Introduction to Sustainable Energy	
2.71	Optics	
2.72	Elements of Mechanical Design	
2.797[J]	Molecular, Cellular, and Tissue Biomechanics	
2.813	Energy, Materials, and Manufacturing	
2.96	Management in Engineering	
Units in Major		177
Unrestricted Electives [4]		48
Units in Major That Also Satisfy the GIRs		(36)
Total Units Beyond the GIRs Required for SB Degree		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. *Students may fulfill this requirement by completing an alternative Course 2 CI-M subject (e.g., 2.013, 2.750[J],or 2.760). No substitutions are allowed for 2.671.*
2. *Consult the MechE Undergraduate Office, Room 1-110, regarding substitutions.*
3. *To encourage more substantial research, design, or independent study, the department permits up to 15 units of 2.THU credit, subject to approval of the student's thesis advisor.*
4. *The department suggests that students select a basic electronics subject (e.g., 2.678, 6.002, or 22.071) as early as possible in their program.*