

MINOR IN MECHANICAL ENGINEERING

The minor in mechanical engineering complements studies in a major field closely allied to mechanical engineering, such as materials science and engineering, aeronautics and astronautics, electrical engineering, management, and a number of other possibilities. The minor shows prospective employers and professional schools that the student has pursued these additional studies in a structured manner with the full endorsement of the faculty of the ME department. Many students find that such certification enhances their employment opportunities.

The requirements for a Minor in Mechanical Engineering are as follows: Students pursuing a minor in the department must complete a total of six 12 unit subjects (including 18.03 as a prerequisite to departmental subjects). Subjects for the minor must constitute a coherent program approved by the department, and be drawn from the required subjects and departmental electives in the Course 2 or Course 2-OE degree programs. These subjects must include four of these degree programs required core subjects.

Note that subjects selected for the minor program may count toward General Institute Requirements and Departmental Program requirements in the major department; however, the subjects selected for a minor in mechanical engineering are expected to constitute a coherent program with a distinctive disciplinary flavor within the field of mechanical engineering. Subjects taken under the junior-senior P/D/F grading option cannot be used for a minor program. The ME Undergraduate Office (Rm. 1-110, x3-2305) is available to help students develop a minor program of study in mechanical engineering.

Students who wish to designate mechanical engineering as a minor should do so by completing the Minor Application Form in consultation with the ME Undergraduate Office by the end of the second year of registration, but no later than the Add Date of one full term preceding the one in which the S.B. degree is to be awarded. A brief statement describing the coherency of the proposed plan of study and its relationship to the major field of study must accompany this form. By the end of the third week of the term in which they expect to receive the S.B. degree, students must submit the Minor Completion Form, signed by the ME Undergraduate Office.

Subjects acceptable for the minor in mechanical engineering:

Core Subjects (take 4):

18.03 Differential Equations (5-0-7)
 2.001 Mechanics and Materials I (3-2-7)
 2.002 Mechanics and Materials II (3-3-6)
 2.003J Dynamics and Control I (4-1-7)
 2.004 Dynamics and Control II (4-2-6)
 2.005 Thermal-Fluids Engineering I (5-0-7)
 2.006 Thermal-Fluids Engineering II (5-0-7)
 2.007 Design and Manufacturing I (3-4-5)
 2.008 Design and Manufacturing II (3-5-4) LAB
 2.009 The Product Engineering Process (3-3-6)
 2.012J Mechanics of Structures (4-1-7)
 2.016 Hydrodynamics (4-2-6)
 2.017J Design of Electromechanical Robotic Systems (3-4-5)
 2.019 Design of Ocean Systems (3-3-6)
 2.086 Numerical Computation for MEs (3-3-6)
 2.612 Marine Power and Propulsion (4-0-8)
 2.671 Measurement & Instrumentation (3-3-6) LAB

Other Subjects (take 2):

2.092 Computer Methods in Dynamics (3-0-9)
 2.12 Introduction to Robotics (3-2-7)
 2.14 Analysis and Design of Feedback Control Systems (3-2-7)
 2.20 Marine Hydrodynamics (4-1-7)
 2.370 Molecular Mechanics (4-0-8)
 2.51 Intermediate Heat and Mass Transfer (3-0-9)
 2.60J Fundamentals of Advanced Energy Conversion (4-0-8)
 2.701 Principles of Naval Architecture (3-0-9)
 2.71 Optics (3-0-9)
 2.72 Elements of Mechanical Design (3-3-6)
 2.793J Fields, Forces, Flows in Bio Systems (4-0-8)
 2.797J Molecular, Cellular, and Tissue Biomechanics (4-0-8)
 2.813 Environ. Benign Design and Mfr. (3-0-9)
 2.96 Management in Engineering (3-1-8) SWE

Other Course 2 subjects may be allowed – please enquire.