

MECHANICAL ENGINEERING

Four Year Plan, FA19 Catalog

The Mechanical Engineering Program has a traditional ABET accredited four-year curriculum involving mechanics, vibrations, thermodynamics, fluid flow, heat transfer, materials, control theory and mechanical design. Graduates of this program find employment in the high-technology elector-mechanical industry as well as in the mechanical and aerospace industry.

Recommended Sequence of Required Courses: Updated May 2022

FALL QUARTER	WINTER QUARTER	SPRING QUARTER
Year 1		
Math 20A Calculus for Science and Engineering	Math 20B Calculus for Science and Engineering	Math 20C Calculus and Analytic Geometry for Science and Engineering
Chem 6A General Chemistry I	Phys 2A Physics—Mechanics	Phys 2B Physics—Electricity and Magnetism
GE (<i>General Education</i>)	GE	MAE 3 Intro/Eng Graphic& Design
GE	GE	GE
Year 2		
Math 20D Introduction to Differential Equations	Math 18* Linear Algebra	Math 20E Vector Calculus
Phys 2C Phys—Fluids, Waves, Thermodynamics, and Optics	MAE 8 MATLAB Programming for Engineering Analysis	TE (<i>Technical Elective</i>)
MAE 20 Elements of Materials Science	MAE 30A Statics & Intro to Dynamics	MAE 30B Dynamics and Vibrations
GE	GE	MAE 131A Solid Mechanics I
Year 3		
MAE 11 Thermodynamics	MAE 101A* Introductory Fluid Mechanics	MAE 101B* Advanced Fluid Mechanics
MAE 107 Computational Methods in Engineering	MAE 143A* Signals & Systems	MAE 143B* Linear Control
MAE 105* Introduction to Mathematical Physics	MAE 160* Mech Behavior Materials or MAE 131B* Solid Mechanics II	MAE 170 Experimental Techniques
MAE 40 (<i>formerly 140</i>)	TE	GE
Year 4		
MAE 101C* Heat Transfer	MAE 156A* Mech. Design I	MAE 156B* Mech. Design II
MAE 150* Comp.-Aided Design	MAE 171A* Mech Eng Lab I	TE
TE	TE	GE
GE	GE	GE

Courses offered in the recommended quarters will not overlap in day/times, midterms, finals, etc. with the other courses. However, if you move courses outside their recommended quarter, we cannot guarantee that they will not overlap with other courses. Deviation from this recommended academic plan could delay graduation. Therefore please avoid moving courses around unless necessary.

- All courses required for the major must be taken for a letter grade. The Pass/No Pass grading option is not allowed.
- Students may graduate with one D in a course required for the major.
- In fulfilling the General Education (GE) requirements, students must take at least 24 units in the arts, humanities, and social sciences, not including subjects such as accounting, industrial management, finance, or personnel administration. Twelve GE courses are listed here; individual college requirements may be higher or lower. Please contact your college advisor for more information.
- Technical Elective (TE) courses must be upper-division or graduate courses in the engineering sciences, natural sciences or mathematics and must be selected with prior approval of the Department. Refer to the list of pre-approved TEs available at www.mae.ucsd.edu.

*** ASTERISK DENOTES A COURSE THAT MUST BE TAKEN AT LEAST BY THAT QUARTER TO GRADUATE IN FOUR YEARS.**