

## **Mechanics**

The mechanics program in the Department of Mechanical Engineering is tailored to provide the students with a broad background in the area of classical mechanics. This area of mechanics is concerned with the motion of bodies as well as the relationship between the external loads and the resulting internal stresses and deformation of solids such as beams, shafts, struts, columns, and piston rods. A thorough understanding of mechanics is essential in the safe design of buildings, bridges, machinery, automobiles and aircraft as well as to optimize and ensure the reliability of countless commercial products. Undergraduates in Mechanical Engineering are introduced to the area of mechanics in several required courses: ME 525, Statics; ME 526, Mechanics of Materials; and ME 627, Dynamics. An additional course, ME 643, Machine Design for BSME students or OE 758 Design of Ocean Structures for BSOE students, is also required.

Students who are interested in pursuing their study of mechanics further can do so by taking additional technical electives in their junior and senior years. In particular, students can take courses such as ME 786, Introduction to Finite Element Analysis; ME 727, Advanced Mechanics of Solids; ME 724, Vibration Theory and Applications; and ME 735, Mechanics of Composite Materials.