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MECHANICS

Book 1 (of 2)

This is a calculus-based book meant for the first semester of a first year survey course taken by engineering and physical science majors. It has a traditional order of topics whereby force is discussed before energy. It is divided into 17 chapters that cover a review of high school physics, scaling and estimation, vectors, velocity, acceleration, forces, circular motion, gravity, conservation of energy, work, conservation of momentum and angular momentum, vibrations, and resonance. A treatment of relativity is interspersed with the Newtonian mechanics, in optional sections.

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