

**PHYS 70005**  
**Classical Mechanics**

- Mechanics of a particle
- Systems of particles
- Rigid bodies
- Lagrangian formulation of classical mechanics
- Hamiltonian formulation of classical mechanics
- Theory of small oscillations
- Central force motion and harmonic oscillators
- Continuum mechanics

**Optional topics:**

- Non-linear dynamics and chaos
- Hamilton-Jacobi Theory
- Special Relativity

**Level:**

- Graduate students: Core requirement.

**Offered:** Every fall.

**Text:** *Classical Mechanics* (3rd Edition) by Herbert Goldstein, Charles P. Poole, and John L. Safko