

## Texts and References

**Required:**

- i.) *Mechanics*; L.D. Landau and E.M. Lifshitz: classic but terse text; has a “just the facts” style
- ii.) *Theoretical Mechanics of Particles and Continua*; A. Fetter and D. Walecka: easier, good problems, good sections on continua
- iii.) *Introduction to Dynamics*; I.C. Percival and D. Richards: nice little book on Hamiltonian mechanics

**References:**

- i.) *Classical Mechanics*; H. Goldstein: good on formalism and structure of mechanics
- ii.) *Mathematical Methods of Classical Mechanics*; V.I. Arnold: advanced mathematical treatment of mechanics, good on structure of the theory
- iii.) *Geometric Mechanics, Part I: Dynamics and Symmetry*; Darryl D. Holm: good treatment of eikonal theory, great introduction to geometrical structure of mechanics.
- iv.) *Geometric Mechanics, Part II: Rotating, Translating and Rolling*; Darryl D. Holm
- v.) *A Treatise on the Analytical Dynamics of Particles and Rigid Bodies*; E.T. Whittaker: old classic-try the problems!
- vi.) *Principles of Optics*; M. Born and E. Wolf: good treatment of geometrical optics
- vii.) *Theory of Elasticity*; L.D. Landau and E.M. Lifshitz: classic physics text on elasticity. Brief...
- viii.) *Fluid Mechanics-A Short Course for Physicists*; Gregory Falkovich: elegant short text with interesting treatment of selected topics
- ix.) *Newton’s “Principia” for the Common Reader*; S. Chandrasekhar: remarkable study of Newtonian mechanics
- x.) *Emmy Noether’s Wonderful Theorem*; D.W. Neuenschwander: a study of symmetry-accessible but broad coverage

**Amusement Reading:**

*The Theoretical Minimum*; L. Susskind and G. Hrabovsky: unusual and non-trivial popular book on the theory of mechanics based upon Susskind’s Adult Education classes at Stanford. Has content.