Texts and References

Required/Strongly Recommended:

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 Continuua*; A. Fetter and D. Walecka: easier, good problems, good sections on continuua

iii.)   *Theory of Elasticity*; L.D. Landau and E.M. Lifshitz: classic physics text on elasticity. Also rather terse, but elegant.

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.)   *Introduction to Dynamics*; I.C. Percival and D. Richards: nice little book on Hamiltonian mechanics

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

xi.)   "Feynman Lectures on Physics", Vol. II; the two chapters on elasticity are quite nice.

xii.)   *Lectures on Quantum Mechanics*; Paul A.M. Dirac

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.