

Primary Texts for Classical Mechanics

- John R. Taylor *Classical Mechanics*, University Science Books, 2005. A very popular text on intermediate classical mechanics. It has very extensive explanations, perhaps sometimes even too extensive. Problems are formulated in a way directing students into solutions.
- Stephen T. Thornton and Jerry B Marion *Classical Dynamics*, Thomson-Brooks/Cole, 5th edition, 2004. This is a “classic” classical mechanics book at the level of this course. Although some people believe that recent editions are not as good as older ones, it is still a very good book. However, the problems are not well formulated, occasionally contain errors in the formulation, and sometimes do not follow directly from the subjects discussed in a given chapter.
- Keith R. Symon *Mechanics*, Addison-Wesley, 3rd edition, 1971. Another classic book. Somewhat older but still excellent.
- Tom W.B. Kibble and Frank H. Berkshire *Classical Mechanics*, Imperial College Press, 5th edition, 2004. Another classic gem.
- Daniel Kleppner and Robert J. Kolenkow *An Introduction to Mechanics*, McGraw-Hill 1973. This book is at a level between that of the “Fundamentals of Physics” by Halliday *et al.* and “Classical Mechanics” of Taylor. In particular, no Lagrange or Hamilton formalisms are used. However, some subjects, for example rigid-body rotation, are at a rather advanced level. Large number of examples.

Advanced Texts for Classical Mechanics

- H. Goldstein, C. Poole, J. Safko *Classical Mechanics*, Addison-Wesely, 3rd edition, 2002. The most recognized authoritative text on classical mechanics at the level above the present course.

Texts covering Physics Fundamentals Background

- Randall D. Knight, *Physics for scientists and engineers*, Addison Wesley, 2nd edition, 2008. Extensive and very elementary explanations of the material. Slightly lower level than Halliday-Resnick, some erroneous material.
- D. Halliday, R. Resnick, and J. Walker (or K.S. Krane), *Fundamentals of Physics*, Wiley 1993 or later. Classic book for Fundamentals of Physics courses such as PHYS 207.

Texts covering Mathematical Background

- G.B. Thomas and R.L. Finney *Calculus and Analytic Geometry*, Addison-Wesley 1998 or later. A basic calculus text.
- M.L. Boas *Mathematical Methods in the Physical Sciences*, Wiley 1983. This is the best book filling the gap between basic calculus and the needs of undergraduate physics courses.
- B. Kolman and D.R. Hill *Elementary Linear Algebra*, Prentice Hall 2000. This is a good text for 300-level linear algebra.
- W.E. Boyce and R.C. DiPrima *Elementary Differential Equations and Boundary Value Problems*, Wiley 1997. This is a good text to learn differential equations at 300-level.
- G. B. Arfken, H. J. Weber, and F. E. Harris *Mathematical Methods for Physicists: A Comprehensive Guide*, Academic, 2012, 7th Edition. The best reference text for physicists, but explanations are uneven.