

Texts and References

- There are *no* required texts. Extensive material will be made available on the course website: <http://physics.ucsd.edu/students/courses/spring2014/physics281>.
- Some Recommended Useful Books:
 - i.) “Scaling”, G.I. Barenblatt; C.U.P., 2003
→ basic theory of scaling → *non-trivial*
 - ii.) “Qualitative Methods in Physical Kinetics and Hydrodynamics”, V.P. Krainov; A.I.P., 1992
→ 2 Landau-Lifshitz books, in ‘back-of-envelope’ style
 - iii.) “Fluid Mechanics: A Short Course for Physicists”, G. Falkovich; C.U.P., 2011
→ excellent, *short* text on fluids, from a *physics* perspective. Works on multiple levels.
 - iv.) “Applied Hydro- and Aeromechanics”, L. Prandtl and O.G. Tietjens, Dover, 1957
→ an accessible, practical classic, at a Dover price
- Some Online Resources:
 - i.) “Order-of-Magnitude Physics: Understanding the World with Dimensional Analysis, Educated Guesswork, and White Lies”, S. Mahajan, et al.
<http://www.inference.phy.cam.ac.uk/sanjoy/oom>
→ partial manuscript from Caltech estimation course. Limited content, but accessible.
 - ii.) <http://astro.berkeley.edu/~echiang/oom/oom.html>
→ website for E. Chiang’s estimation course at U.C. Berkeley. It offers a wealth of goodies!
 - iii.) <http://www.pma.caltech.edu/Courses/ph136/yr2012/>
→ K. Thorne and R. Blandford’s text: “Applications of Classical Physics”
See especially Chapters 13-16, 18. Level is intermediate, treatment is broad, and price is right!