

Physical and Dynamical Oceanography: Books

Course Texts:

Pickard, G.L, and K. O. Emery, *Descriptive Physical Oceanography*, Pergamon Press. Basic features of the ocean, observational methods, and descriptions of each oceanic region.

Pond, Stephen, and George L. Pickard, *Introductory Dynamical Oceanography*, Pergamon Press. Basics of ocean physics; required text for this course in some previous years.

Other General Texts:

Gill, Adrian E., *Atmosphere-Ocean Dynamics*. Especially good for treatment of waves in the ocean.

Kundu, Pijush, *Fluid Mechanics*, Academic Press, 1990. An outstanding textbook, including many topics relevant to physical oceanography.

Pedlosky, Joseph, *Geophysical Fluid Mechanics*, Springer-Verlag, 1987. In-depth theoretical treatment of large-scale dynamics of the ocean and atmosphere.

Stommel, Henry. *The Gulf Stream*, University of California Press, 1966. Somewhat old, but a classic, quite readable, by one of the greatest physical oceanographers.

Sverdrup, H.U., R.H. Johnson, and M.W. Fleming, *The Oceans, Their Physics, Chemistry, and Biology*, Prentice-Hall, 1942. The state of the art in 1942; surprisingly relevant even today.

Tomczak, M., and J.S. Godfrey, *Regional Oceanography: An Introduction*, Pergamon, 1994. Excellent descriptions of each region of the ocean.

Wunsch, C., and B. Warren, eds., *Evolution of Physical Oceanography*, MIT Press, 1981. Articles, of widely varying quality (from great to terrible), describing the major topics of physical oceanography.

Other general books that cover much of the course material are by Mellor, Knauss, and Cushman-Roisin.

Various Topics:

Csanady, G., *Circulation in the Coastal Ocean*, Reidel, 1982.

Levitus, Sidney, *Climatological Atlas of the World Ocean*, NOAA Professional Paper 13, US Dept of Commerce, 1982.

Philander, George, *El Nino, La Nina, and the Southern Oscillation*, Academic Press, 1990.

Robinson, Allan, *Eddies in Marine Science*, Springer-Verlag, 1983

Smith, Walker O., ed., *Polar Oceanography; Part A: Physical Science*, Academic Press.

Journals:

The most-read journals for physical oceanography are *J. Phys. Oceanogr.* and *J. Geophys. Res.–Oceans*. Other important journals: *J. Mar. Res.*, *Deep-Sea Res.*, *Tellus*, *Dyn. Atmos. Oceans*, *Prog. Oceanog.*, *J. Climate*, *Continental Shelf Res.*, and *J. Fluid Mechan.*