Introduction

This course is intended as a comprehensive introduction to seismology. Our goal is to provide a general overview of the basics of seismology. The emphasis will be practical (how things are actually done), rather than on detailed theory or derivations.

There are no formal prerequisites to this class but some familiarity with vector calculus and computer programming is assumed. Many of the problem sets involve writing computer programs. Alternative assignments (often more math intensive) will be provided for those of you without access to computers. Geophysics students, however, are strongly encouraged to do the computer assignments whenever possible.

A website for the class is http://mahi.ucsd.edu/shearer/227A/. This lists where we are in the book and the homework assignments.

Our text will be:

Shearer, P.M., *Introduction to Seismology*, Cambridge University Press, Cambridge, 1999.

This book is derived from the notes used in this class in previous years. There are supposed to be some copies available at the Birch Aquarium bookstore. If they run out, there may also be copies at the UCSD bookstore. It can also be ordered from amazon.com or your favorite online bookstore. There is supposed to be copy on reserve at the SIO library (please let me know if it's not there). There is also a copy in the IGPP reading room.

Information about how to obtain copies of the subroutines in the book and a list of typos is contained at http://mahi.ucsd.edu/shearer/book.html.

I have put some supplemental material online through the UCSD library reserves (search on 227A or my name at http://reserves.ucsd.edu/), which I may sometimes assign you to read.

Other books that you may find helpful include:

Aki, K. and P. Richards, *Quantitative Seismology: Theory and Methods*, W.H. Freeman, San Francisco, 1980. (recently reprinted in a single volume by University Science Books)

Lay, T. and T.C. Wallace, *Modern Global Seismology*, Academic Press, San Diego, 1995.

Stein, S. and M. Wysession, An Introduction to Seismology, Earthquakes, and Earth Structure, Blackwell Publishing, Boston, 2002.

This year there will not be a final exam for the class. Instead you will be writing a short review paper (or research proposal) on a topic of your choice. Details will follow. Grades will be based on both the assigned problem sets and the research report. Please try to return assignments by the due date, so that we can discuss the answers in class.

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