EART 265 Syllabus

Instructors

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Class website: http://www.es.ucsc.edu/~fnimmo/website/eart265.html

Class description

The course focuses on how to estimate answers to problems on your feet with few resources other than what you have in your head already. One important tenet is that the only way to get better at *solving* problems is *doing* problems.

Topics covered:

- Material properties
- Forces and mechanics
- Heat transfer and energy
- Waves and oscillators
- Fluids and turbulence
- Chemical reactions

Examples will be drawn from all aspects of science:

- Planets
- Stars and the Universe
- Oceans and Atmospheres
- Energy and the Environment
- Plants and Animals
- Real life

Evaluation

- Class preparation and participation: 30%
- Problem sets: 40%
- Final project: 30%

Because doing problems, both in and outside of class, will be an integral part of the course, we weight participation rather strongly. There will also be a final project with class presentation in lieu of a final exam.

Class preparation (very important!)

This course will be much more interactive in the classroom than most others you have taken. To make the most of the classroom time, we expect you to *read* and *understand* (i.e. read more than once, think about the material, do your own background reading to catch up and/or refresh your memory) *before each class!!* We won't make the full argument here, but if you want to learn more about why we expect this, go to the class website and look at the article "The Lecture System in Teaching Science" by R. T. Morrison.