Beaches, Reefs, and Climate Change
GG420 - Rm POST 708 - T, Th 1:30 – 2:45 pm
Dr. Chip Fletcher, POST 802a, 956-2582, fletcher@soest.hawaii.edu
Office hrs: MWF 1-3pm or just walk in and try any time

**Week of** | **Weekly Topic** | **Assignment**
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1 | What do we study? Ice Age and Interglacial |  
2 | Last interglacial | Kaena Point Trip – field paper
3 | Last glacial | (relate observations to literature)
4 | Climate change |  
5 | Climate change | Pick focus area – give
6 | Climate change | talk in class
7 | Reefs | Goat Island Trip
8 | Reefs |  
9 | Reefs and Dating Quaternary materials | Mid-Term Exam
10 | Beaches |  
11 | Beaches |  
12 | Coastal Management | Kailua Bay Trip
13 | Coastal Management |  
14 | Student presentations | Beach profile field project
15 | Student presentations | Final Exam

**Field Trips:** Kaena Pt., Goat Island, Kailua Bay

**Text:** Fletcher, Living on the Shores of Hawaii, UH Press

**Grading:** Assignments 40%, 2 exams 30% each

Your grade is also dependent on attendance, enthusiasm, class participation, and your paper efforts.

**Learning Objective:** To interpret processes operating in coastal geologic systems in order to effectively manage coastal resources in a time of rising sea level and growing human population.

The Department of Geology and Geophysics has established the following undergraduate student learning objectives.

1. Students can **explain** the relevance of geology and geophysics to human needs, including those appropriate to Hawaii, and be able to discuss issues related to geology and its impact on society and planet Earth.
2. Students can **apply** technical knowledge of relevant computer applications, laboratory methods, and field methods to solve real-world problems in geology and geophysics.
3. Students **use the scientific method** to define, critically analyze, and solve a problem in earth science.
4. Students can **reconstruct, clearly and ethically**, geological knowledge in both oral presentations and written reports.
5. Students can **evaluate, interpret, and summarize** the basic principles of geology and geophysics, including the fundamental tenets of the sub-disciplines, and their context in relationship to other core sciences, to explain complex phenomena in geology and geophysics.