

Coastal Geology - 2007

GG420 - Rm POST 708,

T, Th 9:00 ~ 10:15 pm

Dr. Chip Fletcher, POST 721C, 956-2582, fletcher@soest.hawaii.edu

Office hrs: After class or just walk in and try any time

Week of	Weekly Topic
Aug. 21/23	Introduction to class/Introduction to the Quaternary
Aug. 28/30	Isotopic Stages
Sept. 4/6	Orbital Theory
Sept. 11/13	Global Change
SUNDAY SEPTEMBER 16 – FIELD TRIP TO KAENA POINT	
Sept. 18/20	Modern Sea-Level Rise
Sept. 25/27	Coastal Classification
October 2/4	Coastal Classification
October 9/11	Quaternary Dating PAPER I DUE
SUNDAY OCTOBER 14 – FIELD TRIP GOAT ISLAND	
October 16/18	Coastal Processes
October 23/25	Coastal Processes
Oct. 30/Nov. 1	Barrier Islands
November 6/8	Holocene Sea-Level Rise EXAM
FRIDAY-SUNDAY NOVEMBER 9-11 – MOLOKAI FIELD TRIP	
November 13/15	Hawaii Reefs
November 20/22	Coastal Erosion
November 27/29	Coastal Erosion PAPER II DUE
FRIDAY, NOVEMBER 30 – KAPAPA ISLAND FIELD TRIP	
December 4/6	Student TALKS

Grading: Two papers reporting on field trips and summarizing geologic framework of the coast are due. All papers in the style of the journal Geology (please read “Instructions to Authors” in the journal). Papers will be edited and returned to you for re-writing.

Each paper worth 30% of your grade = 60%.

EXAM worth 25% of your grade

Discussion paper worth 10% of your grade

General scholarship, class participation etc., 5%

Field Trips:

1. Ka'ena Point; middle Pleistocene sea level, island tectonics
2. Goat Island – Laie Point; Holocene sea level, coastal plain development, late MIS 5a-d
3. Molokai Weekend: eolianite mapping, stratigraphic section, island volcanology
4. Kapapa Island; coastal processes, Holocene sea level, coastal plain development, late MIS 5a-d
5. Potential additional field trip if students organize - Flat Island/Mokulua's; last interglacial-5e, Koolau volcanology, coastal processes, Holocene

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.

GG420 Important References

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*Fletcher, C.H., and Jones, A.T., 1996. Sea-level highstand recorded in Holocene shoreline deposits on Oahu, Hawaii: *Journal of Sedimentary Research*, v. 66, p. 632-641.

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