

Summer 2014 Term 6A: May 19-June 28, 2014
ENVS 1030: Tropical Ecology and Sustainability

A Kauai Field-Based Course
Field Trip to Kauai: June 2-6

Instructors: Chuck Blay and Andrew Greene

ENVS 1030 is a course in the General Education Program, under the Values and Choices Theme- Ethical Inquiry.



Hike on Na Pali Coast



Na Pali Coast



Waimea Canyon



Hike Waimea Canyon



Coastal Processes, Beach Formation, Sand Dunes



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Field Study Program

5 day Field Trip (June 2-6) includes 6 nights lodging, 5 days instruction/field trips

Pre-Course Activities: A list of pre-course required readings will be assigned. It is expected that a one-week period of time (between May 19 and June 1) will be necessary to acquire familiarity with the material. Each student will select a topic on which to prepare a pre-course written report. Online communication with instructors prior to field trip.

Day 1: Geology: Course Overview and Logistics; Lecture– *Geologic History of the Hawaiian Islands and the Island of Kauai*; Field Excursion (6-7 hrs) - drive to west side of island, and hike into Waimea Canyon to examine the island's volcanic materials and the weathering and erosive processes within a tropical setting.

Day 2: Coastal Sediments (Beaches): Lecture– *Sedimentary Processes of a Volcanic Island*; Field Excursion (6-7 hrs) – beaches of the Mana Coastal Plain, including Waimea volcanic sand, and carbonate beaches of Kekaha and Polihale; Mana sand quarry (fossil beach).

Day 3: Biogeography (Plants and Animals of Hawaii): Lecture– *Biogeography/Botany of Hawaii and Kauai*; Field Excursion (6-7 hrs) – drive to north side of Kauai with brief stops and interactive tour through Limahuli Gardens; hike along part of Na Pali coast trail.

Day 4: Hawaiian Culture: Field Excursion (6 hrs) – *Wailua Valley Heiau Complex*; Hawaiian Arts and Crafts (3 hr); Hawaiian Chants and Hula integrated with natural history (3 hrs).

Day 5: Fringing Coral/Algal Reefs of Kauai: Lecture– *Coral/Algal Fringing Reefs of Hawaii*; Field Excursion/Monitoring Exercise (6-7 hrs) – Prominent coral/algal fringing reef at Pilaa, near Kilauea, Kauai.

Post-Course Report: Course participants will be required to submit a comprehensive report on the results of their field trip (due by June 28).

Examples of Topics in the Course: Geologic Origin of Oceanic Volcanoes; Pacific Basin Plate Tectonics; Hawaiian Environmental Systems; Development of Soils on a Volcanic Landscape in Tropical Environmental Settings; Island Biogeography: Dispersal and Establishment in Isolated Tropical Settings, Isolated Island Fauna & Flora -- Occupation and Evolution; Impacts of Invasive Tropical Island Fauna and Flora; Human Impact on Isolated Tropical Island Fauna and Flora; Hawaiian Reef Systems; Tropical Island Beach Systems; Influence of Climate on Tropical Island Environmental Systems.

Course Fees:

HPU Tuition (3 credit hrs).

Airline: travel arrangements to Kauai Island will be on your own and arranged for by each course participant; arrival on Kauai, Sunday, June 1, 2014

Seminar Fee (**\$610**): covers ground transportation, fuel, fees for parks, insurance, defers high housing costs, teaching materials, field supplies, evening films, and includes one textbook: *Kauai's Geologic History* by Blay & Siemers, 2012.

Lodging on Kauai (**\$210; 6 nights @\$35/night**): Comfortable condominium-style accommodations.

Daily meals **\$175 (5 days @\$35/day)**: lunches and dinners are provided; breakfast prepared independently. Group evening meals will be provided in a nearby facility.

Total cost excluding HPU Tuition and airline travel to Kauai. \$995

Field Trip Leaders

Charles Blay is a geologist/naturalist presently living and working on the island of Kauai, Hawaii. Since 1996, Chuck's emphasis has been on the investigation of the natural environments and sedimentology of the Hawaiian Islands, specifically Kauai and Hawaii. Chuck has published *Kauai's Geologic History*.

Andrew Greene is an Assistant Professor at Hawaii Pacific University where he teaches environmental science and geology.

Contact agreene@hpu.edu with any questions.