

HAWAII

BIOLOGY · MAY 2018

Trinity Western University Travel Studies



TRINITY WESTERN UNIVERSITY

Gain an appreciation for the marine and terrestrial ecosystems of the Big Island of Hawai'i.



WE WILL SPEND APPROXIMATELY ONE WEEK ON THE TWU campus studying introductory material and preparing for the trip. We will then spend four weeks in Hawaii, situated at the Captain Cook area, south of Kona. We'll spend half our time on coral reef biology and the remainder on tropical plants, for a total of 6 semester hours of lab science credit. We will be based at the waterfront of the Kealahou Bay Marine Life Conservation District, which includes some of the most spectacular underwater habitat remaining in the Hawaiian archipelago. From there we will visit other areas of the island, including beaches, mountains, and Hawaii Volcanoes National Park.

We'll be blessed with the opportunity to view some of the most exciting biological habitats in the world. The course objectives include the following goals:

1) familiarity with the plant and animal inhabitants of a volcanic island and its fringing coral reef, using field and laboratory techniques;

2) an understanding of ecological relationships between organisms of two of the richest and most diverse habitats on earth: the tropical coral reef and the tropical forest; and

3) discussion points on Christian stewardship of the environment in some of the most beautiful, yet most vulnerable, parts of creation.

COURSES

BIOL 318 TR · Tropical Botany

As an exploration of the botanical riches of the tropics, focusing on the plant life of Hawaii, the course will trace fundamentals of plant taxonomy, physiology, and ecology in relation to complexities of existence on the most isolated island chain in the world. Issues related to indigenous vegetation, including effects of introduced animals and plants, agriculture, and ethnobotany, will be discussed.

Prerequisites: BIOL 103, 104 and 105; or BIOL 113, 114 or equivalent, and instructor's consent.

BIOL 364 TR · Coral Reef Ecology

A field course focusing on the systematics and ecology of tropical coral reef organisms. Plants, animals, and physical factors of a fringing coral reef are examined through snorkeling excursions and laboratory studies. One species will be chosen for a detailed research project.

Prerequisites: Advanced standing in Biology and instructor's consent.

CONTACT

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INSTRUCTORS



David Clements, Ph.D.

DAVID CLEMENTS IS A PROFESSOR of Biology and Environmental Studies at Trinity Western University, where he has taught since 1994. He is the Co-chair of the Environmental Studies and Geography Department. Dr. Clements has investigated a variety of ecological issues such as Garry Oak Ecosystem restoration in the BC Gulf Islands, biological invasions in the Fraser River delta, and the Mile-a-Minute Weed in China's Yunnan Province. He is interested in the ongoing challenges of the adaptability of weeds in combination with other issues, such as globalization and climate change.



Karen Steensma, MSc

KAREN STEENSMA IS A PROFESSOR of Biology and Environmental Studies at TWU and co-owner of a commercial dairy farm in Lynden, WA. She has taught marine ecology and coral reef ecology field courses for 30 years in the Pacific Northwest as well as the Hawaiian Islands, the Caribbean, and the South Pacific.

Her particular interests are molluscs, both aquatic and terrestrial, as well as ecological agriculture and watershed management. Prof. Steensma has held research grants from various agencies including the World Wildlife Fund, Environment Canada, the BC Ministry of Agriculture, the United States Department of Agriculture, and the Western Sustainable Agriculture Research and Education fund, examining endangered land snails as well as agricultural birds. She also teaches zoology, ecology, and thesis courses at Trinity Western.