

Module 1: Introduction to Earth Systems Field Skills and Observations in the Bay of Plenty and Mt. Ruapehu

Based in the Bay of Plenty (Whakatane), New Zealand, the goals of module 1 are simply to (1)introduce you to New Zealand and (2) provide you with field skills needed for the course. We will introduce basic geologic and biologic field skills and techniques that you will use throughout the program. This includes how to take field notes, sketch

Module 3: New Zealand Marine and Coastal Ecology, Kaikoura Peninsula. Following our week in the Bay of Plenty, we'll head down to the South Island. Located 180 km north of Christchurch, the Kaikoura Peninsula is home to extensive rocky shores and a marine canyon only 500 m off the Canterbury Coast. It is also central to the forests, rivers and mountains of the Seaward Kaikoura Ranges. Students will begin the week in Kaikoura exploring the flora and fauna of the rocky shore and observing oceanic influences of the peninsula and near shore environment. We will then be introduced to members of Te Korowai o Te Tai Marokura, a local community group, and assess potential avenues for research to complement the implementation of their marine strategy 'Sustaining Our Sea' vision. Next students will venture into the near shore waters on the University of Canterbury boat to collect plankton samples for investigation of the biodiversity within the epipelagic zone near the coast and within the canyon. Finally, we will end the week with the charismatic mega fauna, as we work to identify individual Hector's dolphins and fur seals and record some of their behavior.

Bush whacking!

**Module 4:** New Zealand Terrestrial Ecology, Southern Alps: In this module, students are introduced to New Zealand unique terrestrial ecology (floura and fauna). We will understand how the biosphere is coupled to the atmosphere, geosphere and hydrosphere by conducting a series of biologic surveys across the southern island. Utlizing skills learning in Module 1, we will begin in the southern alps and be exposed to the alpine ecology of the alpine. We will take an indepth look at Beech forests, Wetas and habitat fragmentation. Following, we transition to Banks Peninsula where we will conduct habitat and vegetation mapping and learn how local non-profits are conserving the land.



Southern Alps!

**Module 5: Research Projects:** During the final days of field camp, student will collect data utilized for their semester research projects. Students will be presented with a variety of projects. If they choose a project with existing data sets, students will be field assistants during these days and develop their project proposals at night.