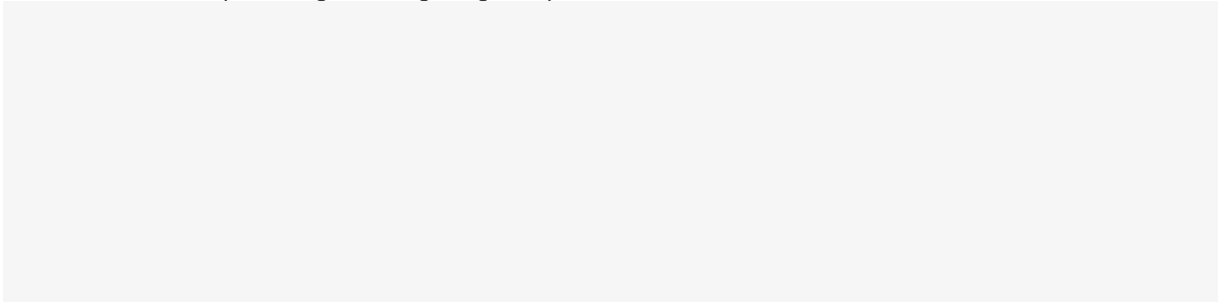


**2020 field modules (modules subject to change)**

**Module 1: Volcanoes – giveth life and taketh away: Introduction to field observations through volcanology and hazards.** Volcanoes bring to light a major problem in measuring and mitigating human environmental impacts, and that is the void in our understanding of how the planet has been impacting itself. Volcanoes can be a threat to society, but they are also a major source of geothermal energy New Zealand relies upon to meet its energy demands. The North Island of New Zealand is one of the most volcanically active regions on Earth. The magnitude, frequency, and environmental impact of eruptions from 300 thousand years ago to the present can be quantified in both time and space through careful field observations. In this module we will first observe and map the products of volcanic eruptions and discuss their impacts on civilization. A special focus will be placed upon introducing field mapping, observations and recording these observations in field notebooks. Finally we will look at how New Zealand is currently exploiting geothermal energy to meet its energy demands.

**Field Module 2: Introduction to Geologic Field Mapping in Castle Hills Basin.** The first component of field camp is an introduction to field mapping in the Castle Hill Basin, located in the eastern foothills of the Southern Alps, inland Canterbury. Students will learn basic field skills including compass work and navigation, triangulating for location, field notetaking and sketching, outcrop descriptions, introduction to geomorphological observations, and producing a small geologic map.



Mapping the Basin of the Castle Hills Basin, Canterbury, New Zealand

**Field Module 5: Independent Research Projects.** During field module 5, students will apply the skills acquired during the first four weeks of field camp to group mapping projects of previously unmapped terrain on Banks Peninsula. This is the capstone field camp experience that leads into the initiation of your semester research project during this last field module. Research projects in 2017 could involve volcanology, igneous petrology, geomorphology, paleoclimatology, digital mapping (GIS and 3-D visualisation), geo-archaeology, geologic hazards, engineering geology, and geo-education.