

# GEOL 475 *Seismotectonics & Seismic Hazard*

Spring Semester 2021

Professor Mark Stirling



## Introduction

This course will provide you with an overview of seismotectonics and seismic hazard analysis. These are topics that draw on geology, geophysics and statistics to understand earthquake occurrence and consequent hazards. The courses you have taken in previous years will be sufficient for you to do well in this course. Furthermore, you will be introduced to topics that may pique your interest for future studies and work. This has happened to several students in the recent past. Although this course has the official name of “Advanced Topics in Rock Deformation” on Blackboard, you will not be learning about rock deformation.

We will meet **9.30am to 11am** on **Tuesdays** in the **meeting room 1S03**. During these meetings I will run through a ppt, but also allow time for questions and discussion. Assessment will be by way of an individual project, and a final exam. The project topic will be your choice, subject to my approval and initial guidance. Late in the semester you will be asked to give a short presentation on your project to the rest of the group, which will then be followed by questions and discussion. The timing of this before the project deadline (see below) will give you time to make any modifications to your project report before handing in.

I have some work-related travel coming up during the semester, but I will give you advanced warning of modifications to the schedule if a clash arises.

## Timetable

Month	Date	Activity
July	13	Earthquake statistics
	20	Prehistoric earthquakes
	27	Integration of instrumental and prehistoric earthquake data
August	3	Earthquake hazard analysis
	10	Outputs for end-users/hazard communication
	17	Case study: Hikurangi subduction zone and Alpine Fault
	24	Case study: Earthquake hazard assessment for critical facilities
	31	Mid semester break
September	7	Work on individual projects
	14	Work on individual projects
	21	Project presentations
	28	Revision session
October	5	Project deadline
	12	Individual revision
	15	Lectures end University wide
	20	Final exams begin
November	13	Final exams end