

**Lecture-Level learning goals for *Earthquakes***  
**UBC EOSC 114, *The Catastrophic Earth-Natural Disasters***

Day 1

- Use concepts of (1) stress causing strain and (2) plastic versus brittle deformation to explain how energy is released causing earthquakes
- Recognize visual evidence of tectonic forces in rocks and landscapes (e.g. fault types)

Day 2

- Explain the global distribution of earthquakes (i.e. rare, large and frequent small quakes) in terms of tectonic plate interactions and the forces that drive them
- Describe how the Earth builds, stores, and releases energy in earthquakes
- Describe how an earthquake moves through the Earth

Day 3

- Describe how an earthquake is recorded and how to locate the epicentre
- Compare and contrast the meanings and uses of earthquake magnitude and intensity scales
- Given any structure, ground type and earthquake location, predict the types and extent of damage likely to be caused by all four seismic waves

Day 4

- Understand that earthquake prediction is difficult and why
- Difference between prediction and forecasting
- Be aware of earthquake hazards and notice how they can be the cause of other natural disasters

Day 5

- Be aware of large and local earthquakes (when are we expecting an earthquake in BC?)
- Know what to do in the event of an earthquakes (survival techniques)