**Lecture-Level learning goals for *Storms***

**UBC EOSC 114, *The Catastrophic Earth-Natural Disasters***

Day 1

* Be wary of the main storm hazards.
* Describe the different types of lightning, how they form, and what happens when they strike something.
* Recognize thunderstorms, be able to identify Tstorm components, and and explain how they evolve.
* Explain how storms get their energy from the sun.

Day 2

* Explain the main characteristics that make a supercell so much nastier than a normal Tstorm.
* Be able to recognize thunderstorms in radar and satellite images.
* Explain the behavior of downbursts and gust fronts, and identify their associated cloud & dust features.
* Describe why the fact that cold air holds less water vapour is critical in explaining how Tstorms can extract energy from humid air.

Day 3

* Be able to recognize tornadoes and wall clouds.
* Explain why supercell thunderstorms spawn the most dangerous tornadoes.
* Relate the Enhanced Fujita scale to different amounts of damage.
* Describe safety procedures near tornadoes.
* Identify the times and places for high tornado risk.

Day 4

* Recognize mammatus clouds and the flanking line, and describe their relationship to Tstorms.
* Explain how vertical and horizontal winds are created by heat released in storms.
* Explain what the continuity effect is, and how it ties vertical and horizontal motions into circulations.
* Describe rain and hail hazards of Tstorms, and state actions you can take to be safe near Tstorms.

Day 5

* Identify the components of a hurricane.
* Explain how hurricanes get and utilize heat energy, and why hurricanes can exist for weeks.
* List the requirements for hurricane existence, describe how hurricanes evolve, and what causes them to die.
* Describe the risks associated with hurricanes, and appropriate safety procedures.