ATM 211

Topics for Exam #1

\* Atmospheric composition and layers of the atmosphere

\* Pressure, dew point, relative humidity

\* Soundings

 \* Finding an inversion, tropopause level, moist/dry layers

\* Radar

 \* How radar works

 \* Reflectivity

 \* Doppler Radar

 \* Dual-pol radar

\* Satellite

 \* Geostationary vs. Polar orbiting

 \* Types of imagery: Visible / Infrared / Water Vapor

\* Isobaric maps

\* Map terminology (gradient, trough/ridge)

\* Thickness and geopotential height

\* Forces and basic force balances

 \* Pressure gradient force

 \* Coriolis force

 \* Geostrophic balance

 \* Frictional force

 \* Surface flow (Ekman/surface balance)

\* Why is there a jet stream? (relationship between jet and temp gradients)

\* Divergence and convergence, and their relation to surface highs/lows

\* Curved flow, and gradient wind balance

 \* Ageostrophic wind

 \* Divergence and convergence in curved flow

\* Vorticity (curvature and shear vorticity)

\* Advection / temperature advection

\* Vorticity advection

 \* CVA/AVA and implications (or however far we get in lecture on March 7)

SHW 4th Edition Chapters **1, 2, 3, 7, 8** (only the material we’ve discussed in class)

Any material from the homework (other than RAOB code and contouring)

No geography or airport codes from quizzes!