

**Review Sheet for GEOL 1305**  
**Need to Know all this Material for Exam #2**

**Section 2**

**Mass Wasting as a Geohazard (Chp. 10; Lab 5)**

Terms you need to know:

Slides	Slumps	Rock Falls	Flows
Soil Creep	Mud Flow	Angle of Repose	Liquefaction
Subsidence	Sinkholes		

Concepts you need to know:

Be able to compare the speeds of the different types of mass wasting!

What factors increase the driving versus resisting force on a hillside?

How does the angle of repose differ for different sized sediment?

How does the angle of repose vary for sand with different moisture contents?

Do you think that vegetation will increase and/or decrease the stability of a hillside?

Explain in detail

Where in the US is mass wasting a potential problem?

Is mass wasting a major geohazard in Texas?

What are some of the problems of building a house on a hillside in terms of increasing the potential for mass wasting?

**Coastal Geohazards (Chp. 11; Lab 6)**

Terms you need to know:

Longshore Current	Spring Tide	Tropical Cyclone	Storm Surge
Seawall	Groin	Breakwater	
Beach Nourishment	Tropical Storm	Hurricane	Tropical Depression

Concepts you need to know:

Be able to compare tectonically active (Pacific) versus tectonically passive (Atlantic) shorelines!

Do groins and jetties protect the entire shoreline

What are the types of hazards associated with tropical cyclones both along the immediate shoreline and inland?

Know how tropical cyclones are classified

Know what happens to a hurricane in detail once it makes land fall

Know about the mitigations steps that can protect property and life along the shoreline

**Tsunami Hazards (Chp. 7; Lab 6)**

Terms to Know:

Tsunami	Wavelength	Wave Equation	Run-up
Inundation Limit			

Concepts to Know:

What is a tsunami and know the triggers that can cause a tsunami.

What happens to the velocity, wavelength, and wave height as a tsunami approaches a shoreline?

Where in the world does the greatest risk for tsunami exist?  
What steps can be taken to minimize the loss of life associated with a tsunami?

### **Overview of Plate Tectonics (Chp. 2)**

Terms you need to know:

Lithosphere	Lithospheric Plate	Asthenosphere	Divergent
Convergent	Transform	Subduction Zone	Oceanic Crust
Mid-oceanic ridge	Subduction	Continental Crust	Basalt
Intermediate	Andesite	Focus	Rhyolite

Concepts to Know:

What are the characteristics of a divergent plate boundary?  
What are the characteristics of an oceanic-oceanic convergent plate boundary?  
What are the characteristics of a continental-continental convergent plate boundary?  
What are the characteristics of a transform plate boundary?  
Know about the different types of igneous rocks!  
Know about the different types of earthquakes that can occur along each plate boundary type!  
Know about the different types of volcanic activity that can occur along each plate boundary type!

### **Volcanic Geohazards (Chp. 8; Lab 7)**

Terms you need to know:

Lava	Magma	Viscosity	Lava Flow
Pyroclastics	Nuee Ardent	Shield Volcano	Composite Cone
Caldera	Paheohoe Flow	Aa Flow	Ash
Basalt	Granite	Andesite	Rhyolite
St. Elmo's Fire	Vog	Laze	Lahar

Concepts to Know:

Where do most volcanoes occur?  
What is the relationship between earthquakes and plate boundaries?  
Where in the US is volcanic activity a potential problem?  
Is volcanic activity major geohazard in South Texas?  
What are the different chemical types of lava/magma?  
What are the relationships between magma/lava viscosity, melting temperature, and chemical composition?  
What is the relationship between the viscosity of a lava and whether it erupts gently or violently?  
What risks do pyroclastic flows pose to life and property?  
What risks do volatile emissions pose to life and property? What are the different types of volatiles that are emitted from a volcano?  
Why does an excessive amount of CO<sub>2</sub> emissions from a volcanic area pose a danger?  
How do lahars form? What are the specific hazards associated with a lahar?  
What are the specific hazards (and benefits) associated with a volcanic ash?  
What steps can be taken to minimize the loss of life associated with volcanoes?

## **Earthquake Geohazards (Chp. 6; Lab 8)**

Terms to Know:

Focus	Epicenter	Fault	Offset
Seismograph	Body Waves	P-waves	S-waves
Surface Waves	Crust	Mantle	Inner Core
Outer Core	S-P Interval	Elastic Rebound	Ring of Fire

Concepts to Know:

What is an earthquake?

Know the internal structure of the earth

Where do most earthquakes occur?

What is the relationship between earthquakes and plate boundaries?

Where in the US is earthquake activity a potential problem?

Is earthquake activity major geohazard in South Texas?

How is the epicenter of an earthquake located?

What is the difference between the Richter and Modified Mercalli Earthquake Intensities?

What are the specific, both direct and indirect, geohazards that result from an earthquake?

What are the methods that can be used to predict earthquakes?

What steps can be taken to minimize the loss of life associated with earthquakes?

## **Extraterrestrial Hazards (Chp. 12)**

Terms to Know:

Comets	Asteroids	Meteor	Meteoroid
Meteorite	Crater	Meteorite	Air Blast

Concepts to Know:

What type of extraterrestrial objects will generate an air blast?

What type of extraterrestrial objects will generate an ground blast?

What is the relationship between the frequency and intensity of extraterrestrial impacts?

How can the impact of a large asteroid or comet result in a mass extinction? Know all the effects on the earth of such an impact

What steps can be taken to mitigate this hazard.