Earth Science (ENV 1050) Topics – 4

Deformation & Metamorphism

Deformation

Brittle Deformation
Ductile Deformation
Duration of Load
Effect of Pressure
Effect of Temperature
Elastic Deformation
Plastic Deformation
Recoverable or Permanent
Strain Hardening
Stress And Strain

Deformation Structures

Axial Planar Cleavage
Axial Plane
Bearing and Plunge
Bedding/Cleavage Lineation
Fold Axis
Fold Limb
Strike and Dip

Fold Types

Asymmetric & Symmetric
Domes & Basins
Fold Belts
Homocline
Monocline
Overturned
Recumbent
Syncline & Anticline
Synform & Antiform

Faults & Fractures

Horst and Graben
Joints
Slickensides
Normal, σ_1 Vertical
Reverse & Thrust, σ_3 Vertical
Transcurrent, σ_2 Vertical

Metamorphism

Aureoles
Bulk Chemistry
Cataclastic
Contact & Regional Metamorphism
Fluids
Foliation
Heat
Hydrothermal Alteration
Massive & Foliated Rocks
Metamorphic Facies
Metamorphic Isograds
Pressure
Rock Cleavage

Thermodynamics

Zeroeth Law of Thermodynamics
First Law of Thermodynamics
Second Law of Thermodynamics
Third Law of Thermodynamics
Endothermic & Exothermic Reactions
Enthalpy (H)
Entropy (S)
Free Energy (G)
Gibbs-Helmholtz Equation
Heat (Q)
Internal Energy (U)
Kinetics
Work (W)