# ARCH 331. Study Guide for Quiz 1

This guide is not providing "answers" for the conceptual questions. It is a list of topical concepts and their application you should be familiar with. It is an *aid* to help prepare for the quiz.

**Covers material of Lectures 1, 2, & 3**

- ☐ Dead, live, wind, snow, seismic, impact load types
- ☐ Structural system organization schemes and materials
- ☐ Structural component names
- ☐ Number of levels in horizontal systems
- ☐ Structural system performance requirements (design criteria)
- ☐ Analysis vs. evaluation
- ☐ Grids and patterns
- ☐ Lateral resistance options
- ☐ Horizontal span to depth relationship
- ☐ One-way vs. Two-way systems
- ☐ Load type with respect to structure type
- ☐ Sin, Cos, Tan, opposite, adjacent & hypotenuse
- ☐ Perpendicular
- ☐ Result of acceleration on a mass and Weight
- ☐ Law of transmissibility
- ☐ Internal vs. external forces
- ☐ Tension and compression
- ☐ Collinear, Coplanar, Space, Concurrent & Parallel force systems
- ☐ Vectors and scalars
- ☐ Scale
- ☐ Force Polygon
- ☐ Parallelogram law
- ☐ Tip-to-tail method
- ☐ Resultant of forces
- ☐ Components of a force
- ☐ Direction and type of force in a cable with relation to geometry
- ☐ Cable vs. cable-stay
- ☐ Actions vs. reactions
- ☐ Static friction vs. kinetic friction
- ☐ Moment of a force
- ☐ Varignon's Theorem
- ☐ Moment Couple
- ☐ Equivalent Force Systems
- ☐ Equilibrium
- ☐ Newton's Third Law
- ☐ Free Body Diagram
- ☐ Truss configurations and assumptions for analysis
- ☐ Two-force bodies and relationship to loads
- ☐ Pin connections
- ☐ Method of Joints
- ☐ Zero-force member
- ☐ Special truss member configurations at joints and conditions
- ☐ Negative result for a variable from equilibrium equations from free body diagram
- ☐ Basis of graphical truss analysis