



WK8/DAY .14

ARCH 2330 BUILDING TECH III

AGENDA: Structure – Concrete: Columns & Beams

**Today's Class:** *Revit: Creation of lower building structure using concrete columns & beams.*

*Layout of structural drawings*

*Guided class tutorial on concrete structural elements followed by each student working on the development of structure through their entire building. Setup of structural drawings on titleblocks.*

### Agenda & Attendance (Class Time 3 hours)

#### Activity 1

- Introduction to Columns, Beams and Trusses
  - Student Q & A
  - What role do columns beams and trusses serve?
    - Structural support
    - Transferring loads
  - How are they framed?
    - Developing details
    - Understand how each element of a detail serves a purpose
    - First identify something the detail needs to do (connect a steel column to concrete), then respond to this need accordingly
  - Searching for detail references on the internet : (various searches for details)
    - *Concrete column detail drawings*
    - *Concrete column and beam connections*
  - Evaluate a detail to understand if it works well or not – be skeptical and critical

#### Activity 2 (Revit)

- Concrete Structure (Foundation to first floor)
  - Create concrete slab on grade for basement
  - Create concrete beams to support first floor concrete slab
  - Create first floor concrete slab

#### Activity 3 (Revit)

- Begin layout of concrete and steel details

#### Wrap-Up and Deadlines

- **Complete concrete structure before next class**
- **Begin layout and development of concrete and steel details**
- **Work on wall section**