



WK8/DAY .14

ARCH 2330 BUILDING TECH III

AGENDA: Structure – Columns, Beams & Trusses

Today's Class: *Revit: Creation of upper building structure using steel columns, beams and trusses.
Layout of structural drawings*

Guided class tutorial on steel & concrete structural elements & trusses 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)
 - *Steel column detail drawings*
 - *Steel 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
- Steel Structure (Transition to steel from first floor up)
 - Create Steel columns and beams
 - Create steel trusses

Activity 3 (Revit)

- Begin layout of concrete and steel details

Wrap-Up and Deadlines

- Complete concrete and steel structure before next class
- Begin layout and development of concrete and steel details