Revit 2011 Basics

- Walls
- Modeling with Sketch based techniques
  - using sweep and extrusion
- Doors, windows
- Floors, roofs
- Miscellaneous Functions
Wall Types

- Basic Walls
  - Exterior walls
  - Generic walls
  - Interior walls
  - Foundation walls

- Curtain Walls
  - predefined curtain walls or screen walls consisting of panels and mullions

- Stacked Walls
  - Can define layers of walls for example “Brick over CMU with metal studs”
Wall Types

- **Wall tool** Choose Home tab > Wall from the menu bar or choose the Wall tool from the Design Bar.
Wall Properties

- The Properties can be seen by clicking edit type
Wall Type Parameters

- To view and modify the type or instance parameters of a wall, change and Apply
The *Instance Parameters* table in the Element Properties dialog box shows various parameters and their corresponding values for the selected wall.
Wall Assemblies

- Walls are comprised of layers of material
- It can be seen by Preview on in the Edit Assembly dialog box to view the graphical representation of the layers.
Sketching Walls
Sketching using sweep(Model In-Place Component)
Sketching using sweep
Step 01_Type of Component
Sketching using sweep
Step 02_Use Sweep to create a solid mass
Sketching using sweep
Step 03_Pick/draw the sweep path (plan view)
Sketching using sweep
Step 04_select view to draw the profile
Sketching using sweep

Step 06_ Draw profile and Set up component parameters while in edit mode
Sketching using sweep
Step 06_Add Component parameters
Sketching using sweep
Step 07_Change Component parameter
Sketching using sweep
Exercise 1.

- Draw a path and profile using sweep.
- Add parameters: Height and angle
Sketching using extrusion

- Start with Component > Model in-place > Pick a family
Sketching using extrusion

Pick a reference plane for the extrusion from the elevation view.
Sketching using extrusion

- Draw the profile and set up parameters, if any
Sketching using Blend
Exercise 2

- Create an in-place component using blend.
- Use two different shapes to see the effects
Splitting Walls
Tools, Split
Splitting Walls

- Openings
Importing and scaling images:
Insert > Image
Importing and scaling images

- Modify > Scale
Importing and scaling images
Importing and scaling images

Exercise 3

- Import image from black board
- Scale the image for drawing
Doors and windows

Doors and windows can be placed by choosing Door/Window from the Home Tab.
Doors and windows

- Doors and window types can be selected
Door and window Properties

- Trim Projection Exterior
- Trim Projection Interior
- Trim Width
- Door Material
- Frame Material
- Door Width
- Door Height
- Window Height
- Sill Height
- Window Width
Adding Doors and windows

- Doors can be added to a building model in the plan, section, elevation or a 3D view, by clicking at the desired location.

Adding a door to an existing wall

An added door and its controls
Additional Door and window types

- Doors can be added by loading from Family
Floor

- Floor has to be sketched based on lines, walls
Floor
Roof Types
Roof Types

Specifying the sloping side

Shed roof
Roof by Footprint

Roof by Footprint creates a roof using the building footprint to define its boundaries. To create a roof by footprint, open a floor plan view or a reflected ceiling plan view. You can specify different slopes and overhangs for the roof when you create it, or use default values and refine them later.
Roof by Footprint (Flat)
Roof by Footprint (Gable)
Roof by Footprint (Hip)
Roof by Footprint (Shed)

The wall properties need to be set to unconnected to extend to the slope.
Adding Levels
Exercise 4

- Create roof on a simple project
- Create an overhang of 3’
Adding Levels

- Home>Datum>Levels
Revit tips:
Dimension tool (Equality Constraint)

Before

After

Toggle Dimension Equality
Adding Levels
Exercise 5

- Make levels visible in the sample project
- Add Levels to your project
- Add dimensions
Editing (copy, move, others)
Revit tips:
Copy 2 Clipboard & Paste Aligned-1

Modify ➔ Clipboard ➔ Copy

After clicking Copy, choose Paste Aligned
Revit tips:
Copy 2 Clipboard & Paste Aligned-2

Choose various types of alignments from the drop-down menu. For instance, by choosing “select Levels” another window opens up with currently available levels to pick from.