CAD Drafting Singapore Pte Ltd
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BIM MODELLING COURSE (ARCHITECTURAL) OUTLINE

NO.	TOPICS	LEARNING OUTCOME
	PART 1: THE BASICS	
1.	**Introduction to BIM**	
1.1.	What is BIM?	To understand the relation between BIM & construction life cycle.
1.2.	What is Revit?	To understand that Revit is not the only BIM software.
1.3.	BIM vs Autodesk Revit	To understand that BIM is a process, not a software.
1.4.	Construction Life Cycle	To understand how BIM supports the construction life cycle of a project.
1.5.	Level of Development	To relate level of detail follows the construction lifecycle.
1.6.	Construction Life Cycle vs Level of Development	To understand the relation between CLC & LOD.
1.7.	Typical Modelling Process	To understand the typical modelling process when a project starts.
1.8.	Typical Modelling Process vs Construction Life Cycle	To understand the relation between modelling process & CLC.
1.9.	Typical Modelling Process vs Level of Development	To understand the relation between modelling process & LOD.
1.10.	Construction Project Types	To understand the difference in modelling flow in different project types
2.	**Revit Interface**	
2.1.	Navigation	To demonstrate zoom, pan and rotate.
2.2.	Revit Interface Overview	To recognise the interface of Revit.
2.3.	Properties	To demonstrate changing components and editing component properties.
2.4.	Project Browser	To navigate to all views and understand their definitons
2.5.	View Control	To practise changing settings of the view controls.
2.6.	Ribbon	To understand the different segments of the Ribbon
2.7.	Selection Control	To understand the different type of selection.
2.8.	Quick Access	To understand most used commands in the quick access tool bar
3.	**General Commands**	
3.1.	3D View	To go to 3D view using Quick Acess or double clicking in Project Browser.
3.2.	Select	To demostrate 3 types of selection.
3.3.	Move	To perform move using move command and hold/drag method.
3.4.	Selection Control	To perform selections using selection controls.
3.5.	Pin & Un-pin	To perform pining and un-pinning on element or component.
3.6.	Copy	To perform copying using the copy command.
3.7.	Copy & Paste	To perform copy and paste from one view to another.
3.8.	Align	To perform alignment of 2 objects.
3.9.	Mirror	To perform Axis mirroring and Draw Axis mirroring.
3.10.	Trim & Extend	To perform trim/extend for all disciplines.
3.11.	Split Element	To perform splitting of elements for all disciplines.
3.12.	Family Components	To understand the hierachy of a family and hosting differences.
3.13.	Loading Family Components	To perform loading of family using Direct and Opening.
3.14.	Inserting Family Components	To perform inserting component.
3.15.	Loading Autodesk Components	To perform loading of family using Autodesk Library
3.16.	Rotate	To perform manual rotate and spacebar rotate.
3.17.	Filter Selection	To perform filter selection of all columns in the box.
3.18.	View Range	To understand view range and perform adjustment of cut plane.
3.19.	Visibility Graphics	To understand visibility graphics and perform adjustment of any category.
3.20.	Section	To cut a section and enter the view.
3.21.	Section Box	To create and adjust section box.
3.22.	Drawing Tools	To recollect drawing tools from AutoCAD.
4.	**Starting a Project**	
4.1.	Project Requirements	To understand what to look out for in a project.
4.2.	Starting a New project Process	To remember the typical steps to start a project.
4.3.	Project Templates	To understand what are the use of templates.
4.4.	Coordinates	To execute linking of AutoCAD and moving of Project Base Point.
4.5.	Elevation	To create 3 elevations with correct orientation.
4.6.	Levels	To create 3 levels dimensioned accordingly to reference and their plans.
4.7.	Gridlines	To execute drawing, grouping and positioning of gridlines.
4.8.	Cleaning Up	To clean up by adjusting view range, gridlines, levels and setting scale.

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NO.	TOPICS	LEARNING OUTCOME
	PART 2: ARCHITECTURAL MODEL	
1.	**Designs**	
1.1.	Introduction	To understand the relation between designers and modellers.
1.2.	Linking CAD	To execute linking of AutoCAD Design Drawings
2.	**Modelling**	
2.1.	Creating 3D View	To create 3D view for visual checking.
2.2.	Architectural Columns	To create and place column according to required size.
2.3.	Architectural Walls	To create walls according to required thickness.
2.4.	Architectural Floor	To create floor and dropped floor according to required thickness.
2.5.	Attaching Walls	To attach walls to floor manually and automatically.
2.6.	Doors	To place doors on walls and flip them to the correct position.
2.7.	Windows	To place windows on walls and adjust visibility using view range.
2.8.	Ceiling	To create new ceiling and place in required rooms.
2.9.	Materials	To load a new material and assign it to walls or floors.
2.10.	Staircase	To place staircase, landing and modify settings.
2.11.	Railing	To place railing and modify it's settings.
2.12.	Ramp	To calculate gradient and place ramps without railings.
2.13.	Roof	To model a flat and a sloped roof.
2.14.	Place Components	To place hosted and non-hosted components on different views.
2.15.	Room	To place rooms and adjust room limits.
2.16.	Openings	To create openings using shaft, face and vertical.