REVIT ARCHITECTURE COURSE OUT LINE

Lecture 1 (introduction) :

- what is BIM
- what is BIM model
- How BIM works
- Revit interface elements
- definition of project browser
- definition the difference between instance & type properties for families

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Lecture 2 (Basic BIM info) :

- the scope of work for BIM projects.
- Dealing with templates
- locating the project & set projects parameters & units
- dealing with datum objects (levels & Grids)
- dealing with reference planes .
- Preparing families (system, loaded, modeled in place)
- selection tools in Revit
- Moving techniques in Revit

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Lecture3 (walls options) :

- drawing tools .
- controlling walls instance properties
- moving from single line zoning to detailed plans
- editing walls profiles
- walls openings
- walls types & layers
- inserting doors & windows .
- task

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Lecture 4 (General modifiers)

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Lecture5 (floors)
- drawing tools
- controlling floors foot print
- editing instance properties
- shafts & floor openings
- floors layering
- joining & attaching between floors & walls
- slope arrows & modifying sub elements
- task

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Lecture 6 (roofs& ceilings)
- creating roofs with foot print
- setting up the work plane
- creating roofs by extrusion
- create ceilings
- dealing with ceiling fixtures
- task

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Lecture 7 (curtain walls)
- definition of curtain wall elements & properties in Revit
- manual generating for curtain wall
- automatic generating for curtain wall (by type)
- embedding curtain wall in a solid wall
- special tricks
- task

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Lecture 8 (project 1)

Lecture 9 (Conceptual massing 1)
- basic massing principles
- creating positive & negative forms
- complex massing principles
- task
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Lecture 10 (conceptual massing 2)
- divided surfaces patterns
- creating pattern based surface panels
- task

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Lecture 11 (Conceptual massing 3)
- adaptive components
- pragmatic models
- from massing to architectural elements
- special tricks

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Lecture 12 (project 2)

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Lecture 13 (site)
- create contour from elevation points
- create contour from imported file
- create buildings foot print , cut & fill
- create streets
- redefine sub regions

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Lecture 14 (Structure)

- setting up structural Grid
- structural & architectural columns properties
- beams properties
- foundations (isolated , continuous & flat)
- locating (columns , beams & foundations) on the structural Grid
- creating different shapes of beam systems
- special tricks .

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Lecture 15 (imported objects)
- importing elements resources
- dealing with imported elements
- importing options
- linked files & model Groups
- importing CAD files & dealing with them
- Dealing with sketch up files
- modeled in place families
- wall sweeps & reveals

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lecture 16 (stairs & ramps)
- create stairs by components
- creating monolithic & non monolithic stairs types
- creating ramps
- task

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Lecture 17 (railings)
- creating & editing rail structure
- Creating rail blasters
- ordering blasters
- special tricks
- task

Lecture 18 (views ,sheets & exporting)

- plans& site plans view options
- sections, interior & exterior elevations view options
- creating & editing interior & exterior cameras
- creating & vertical & horizontal sectives
- creating & editing exploded
- Editing graphic display options
- Creating & editing view templates
- Creating sheets templates & manage drafts within
- plotting options
- task

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Lecture 19 (materials)
- Surface patterns
- cut patterns
- model & Graphic patterns
- material appearance
- creating (metal , Glass ,water ,… etc)
- physical & thermal properties
- task

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Lecture 20 (cloud & mental ray rendering)
- sun settings
- rendering dialog
- cloud settings
- editing exposure
- task

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Lecture 21 (V ray rendering 1)
- V ray installation
- V ray set up
- using V ray RT
- setup quality & resolution
- adjust exposure .

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Lecture 22 (V ray exterior rendering)
- dealing with sun settings
- controlling dome lights (HDRI)
- special tricks
- task

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Lecture 23 (V ray interior rendering)
- dealing with sun settings
- controlling dome lights (HDRI)
- controlling artificial lightings
- special tricks
- task

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Lecture 24 (annotations)
- setting dimensions & dimensions style
- Detailing elements
- texts & Tags
- color fill legends
- rooms & area plans

Lecture 25 (energy analysis & schedules)

- Creating & exporting solar studies
- Creating energy simulation
- Creating & editing legends
- Creating & sorting quantities schedules
- Creating & sorting materials take offs
- Creating room & area schedules
- Cut & Fill schedules .

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