



Department of Architectural Engineering  
College of Engineering  
University of Cihan - Sulaymaniyah

Subject: Computer Application IV (REVIT)  
Course Book – Stage 4 – Semester 1

Lecturer's name:

Mohammed Fadhil Hama

Academic Year: 2023-2024

# Course Book

<b>1. Course name</b>	Computer Applications – Revit
<b>2. Lecturer</b>	Mohammed Fadhil Hama
<b>3. Department/ College</b>	Architectural/Engineering
<b>4. Contact</b>	
<b>5. Time (in hours) per week</b>	Theoretical: (1) hour Practical: (2) hours
<b>6. Office hours</b>	<i>To be confirmed</i>
<b>7. Course code</b>	
<b>8. Teacher's academic profile</b>	<ul style="list-style-type: none"> <li>• BSc. in Civil Engineering from The University of Bahrain, Bahrain, 2012.</li> <li>• MSc in Structural Engineering with Materials, United Kingdom, 2013.</li> <li>• PhD in Civil Engineering from The University of Nottingham, United Kingdom, expected to finish by end of 2023.</li> </ul>
<b>9. Keywords</b>	Revit Architecture, BIM
<p><b>10. Course overview:</b></p> <p>In this course, students will learn to model buildings using the building information modelling software, Revit Architecture. They will learn to navigate the user interface, model architectural elements like walls, windows, doors, roofs, floors, structure, curtain wall systems, stairs and etc. They will annotate and dimension drawings, generate sections, details, and schedules.</p> <p>This course teaches students the concepts of Building Information Modelling and introduce the tools for parametric building design and documentation using Revit Architecture.</p>	

**11. Course objective:**

With the AutoCAD Revit software, students should be able to:

1. Master basic tools and commands.
2. Create 2D and 3D Architectural Models.
3. Be proficient in Building Information Modelling (BIM).
4. Have knowledge in collaborative design and documentation (schedules, sections, and details).
5. Project Presentations and Visualizations.

**12. Student's obligation:**

Attending the classes. Completion of all practical tests, exams, and the class work given to them.

**13. Forms of teaching:**

The teaching method will be a mix of both theoretical and practical lectures which focusses on how to use Revit Architecture 2024 CAD software. All the important notes will be provided for students by the lecturer. The lectures will be held in the computer lab, where students will use computers to apply what they have learned during the lecture..

**14. Assessment scheme:**

Quizzes	10%
Class Work	10%
Midterm Exam	30%
Final Exam	50%

**15. Course Reading List and References:**

- Getting Started with Revit Architecture, Autodesk Official Press
- Revit Architecture fundamentals, SDC publication, Autodesk
- Mastering Autodesk Revit Architecture 2016: Autodesk Official Press 1st Edition.
- Autodesk Revit Architecture 2016 Essentials: Autodesk Official Press 1st Edition.
- Autodesk Revit Architecture 2016 No Experience Required: Autodesk Official Press.
- <https://www.autodesk.com/products/revit-family/architecture>
- <https://youtu.be/LV1cVAJ-BIE?feature=shared>
- <https://www.youtube.com/watch?v=Di-pSpNYHO0>
- <https://www.youtube.com/watch?v=IGPzAKxtILA>

**16. The Topics:**

**Note:** According to the given daily subjects, the theoretical lectures will be given within 60-90 mins., and the practical lectures will be given within 90-120 mins. The time of theoretical and practical lecture depends on the nature of subjects and their difficulties. The lecture will continue for 3 hours only.

<b>Week No.</b>	<b>Topic</b>
1	Introduction to BIM, Revit, and software interface. How to work with the Revit and use tools. Features of Revit.
2	Introduction, Mouse (buttons and functions), Start a new project, Place walls, Project Units, Walls (location line + wall types), Visual styles and detail level.
3	Walls, manipulate walls and dimensions, Doors, and Windows, Edit height of walls.
4	Levels, Floors, Ceilings, Components, Sections.
5	Copy, Move, Array, Rotate, Align, Offset, Mirror, Split, split with gap, Trim/Extend Elements, Trim/Extend to corner.
6	Hide / Isolate Elements, Hierarchy Terminology, How to Draw Stairs, Dimension lines.
7	Roofs by Footprint, Grids, Columns
8	Wall Profiles, Wall Openings, Edit Wall types, Rooms
9	Model and Detail Lines, Line styles and Line weights, Crop Views, Section Box
10	View Tips, View Range, Change Cut Plane, Change Bottom Plane, View Depth, cut able Categories, Underlay
<b>Midterm exam starts</b>	
11	Components (part2), Railings, Text, Legends
12	Schedules, Room Schedule, Furniture Schedule, Calculated parameters, Sheets
13	Documents, information, and Printing
14	Reviewing and Preparing for Final Exam
Final exam starts	
<b>17. Examinations:</b>	
The students should expect to design and modify 2D and 3D projects with working drawings.	



Main Lecturer  
**Mohammed Fadhil Hama**

Head of The Department  
**Mrs. Tara Azad Rauof**