

**A Report on Five-days Hands on Training on
"3D BIM Modeling using Revit and Navisworks Manage"
Organised by ASCE – MITS Student Chapter & MITS ISTE Student Chapter
in Association with Department of Civil Engineering
from 06.11.2024 to 11.11.2024**



Report Submitted by: Mr. Vinothkumar. R, Assistant Professor, Department of Civil Engineering.
Resource Person's Details: Mr. Gazal joggy – Habilete Learning Solutions, BIM - Main Faculty; Mr. Gregory Cherian - Habilete Learning Solutions, BIM - Faculty.
Report Received on 23.11.2024.
Venue: SIEMENS LAB, EB 019.
Mode of Conduct: Offline

The Department of Civil Engineering has organized “**Hand’s on Training on 3D BIM MODELING USING REVIT AND NAVIS WORKS MANAGE**” in collaboration with MITS ISTE Chapter from **06/11/2024 to 12 /11/2024** at **SIEMENS LAB, EB 019.**

The Department of Civil Engineering has signed **MOU** with “**Habilete Learning Solutions Pvt. Ltd, Kollam**”. Current industries require students who are well trained in Revit Structure. So in order to boost the placement, department has conducted this training program.

The programme started at 9.30 AM with a welcome address to all the audience by **HOD Civil Engineering, MITS, Madanapalle.** The resource person of this Training program was Gazal Joggy – Main faculty and Gregory Cherian - supporting faculty from “**Habilete Learning Solutions Pvt. Ltd, Kollam**”.

The brief introduction to resource person was given by **Dr. DIPANKAR ROY, HOD/CIVIL,** and the resource Person started the session by extending his hearty thanks to the participants, organizing members, HoD, Principal and Management of MITS Madanapalle for giving him opportunity to share his knowledge and experience in “**BIM Modeling**”.

The Six Days Hands on Training program was Co-ordinated by **Mr. VINOTHKUMAR. R,** Assistant professor, Department of Civil Engineering.
Number of Final year students participated in this training program was: 31

DAY 1 [06.11.2024, FN]

No. of Final year students Participated: 30

The Day 1 Training session started at 9.30 AM and the following topics were interacted with students in FN Session to update their basic skill sets to meet the corporate requirements.

1. Introduction to Building Information Modelling (BIM)
2. Different Dimensions and Level’s of Development in BIM
3. Introduction to Revit software
4. Introduction to Revit Start window and different File Formats used in BIM
5. Introduction to Templates in Revit- Choosing appropriate template for disciplines
6. Introduction to Graphical User Interface
7. Modelling and Modifying Datum Elements in Revit- Levels & Grids.
8. Introduction to Concrete Structural elements in Building
9. Modeling and Modifying Structural Columns.

DAY 1 [06.11.2024, AN]

The Day 1 Training session started at 1.30 PM in AN and the following topics mentioned below were learnt by students and the software plans and drawing tools were practised by them.

1. Modelling and Modifying Structural Foundation Elements.
2. Modelling and Modifying Structural Framing Elements
3. Modelling and Modifying Structural Slab/Floor Elements
4. Basic Introduction the Annotation tools in Revit- Dimension, Text, Spot elevation, Tag etc.
5. Modifying Tag Family- Label and Text Parameters
6. Assigning 'Type' / 'Instance' Properties to the Tag family
7. Introduction to Project parameters, Visibility Graphics & Object Styles in Revit
8. Worksheet -1, Modelling Structural building frameworks and general annotation.

DAY 2 [07.11.2024, FN]

The Day 2 Training session started at 9.30 AM and the following topics were interacted with students in FN Session to update their basic skill sets to meet the corporate requirements.

1. Introduction to Families and Templates in Revit
2. Introduction to Basic Tools – Reference planes, Extrusion, Sweep, Blend, Revolve & Swept Blend
3. Modelling and Modifying elements using Create Tools.
4. Basic Modelling in Revit- Aligning and Locking boundary lines, Labelling, Visibility Graphics, Family Categories etc.
5. Worksheet – Stepped footing/Pile
6. Worksheet – Sloped Footing/Pile
7. Worksheet – Angular Column.

DAY 2 [07.11.2024, AN]

The Day 2 Training session started at 1.30 PM in AN and the following topics mentioned below were learnt by students and the software plans and drawing tools were practiced by them.

1. Worksheet- Trapezoidal Footing
2. Worksheet – Square/Round Pile with Pile caps
3. Introduction Linking and Importing Tools in Revit
4. Steps involved in Linking/Importing AutoCAD (.dwg) file into Revit
5. Project Phase 1- Structural Discipline.

DAY 3 [08.11.2024, FN]

The Day 3 Training session started at 9.30 AM and the following topics were interacted with students in FN Session to update their basic skill sets to meet the corporate requirements.

1. Revision – Family creation
2. Worksheet- Structural Bridge
3. Introduction to Reinforcement Bars in Structural drawing- uses and Application
4. Modelling and Modifying Reinforcement in Structural Components
5. Providing Shape, Placement Plane, Placement Orientation, Rebar set etc.
6. Annotations and Tag family
7. Worksheet- Reinforcement Bars in structural components.



DAY 3 [08.11.2024, AN]

The Day 3 Training session started at 1.30 PM in AN and the following topics mentioned below were learnt by students and the software plans and drawing tools were practised by them.

1. Title Block/ Sheet Setting
2. Introduction to Sketch rebar in Revit
3. Introduction to Steel Structural Components
4. Modelling and Modifying Structural Steel Components
5. Worksheet – Steel framework
6. Introduction to Steel Connections in Revit
7. Cut and Modifiers option in Revit
8. Worksheet – Warehouse Modelling

DAY 4 [09.11.2024, FN]

The Day 4 Training session started at 9.30 AM and the following topics were interacted with students in FN Session to update their basic skill sets to meet the corporate requirements.

1. Basic Introduction to Revit Architecture-Template and Graphical User Interface
2. Introduction to Datum Elements and Layers in Revit- Walls, Floors, Ceilings and Roofs
3. Placing and Assigning Rooms and Rooms Tags, Modifying Tag family
4. Circulation Components
5. Architectural Family Creation
6. Worksheet – Doors
7. Worksheet- Windows

DAY 4 [09.11.2024, AN]

The Day 4 Training session started at 1.30 PM in AN and the following topics mentioned below were learnt by students and the software plans and drawing tools were practised by them.

1. Schedules and Modifying schedules in Revit
2. Introduction to Revit's Visualization Options- Rendering and walkthrough
3. Exploring export Options
4. Introduction to Copy/Monitoring Tools
5. Generating Different Views in Revit
6. Project Phase 2- Architectural Discipline
- 7.



DAY 5 [10.11.2024, FN]

The Day 5 Training session started at 9.30 AM and the following topics were interacted with students in FN Session to update their basic skill sets to meet the corporate requirements.

1. Project Phase 2- Continuation
2. Basic Navisworks Manage- File Formats and User Interface
3. Exporting/Converting .rvt file to .nwc Files
4. Append/ merge Option
5. Selection tree, Selections sets and Search Selection
6. Animation-Fly and Walkthrough
7. Review options, Viewports and Video in Navisworks

DAY 5 [10.11.2024, AN]

The Day 5 Training session started at 1.30 PM in AN and the following topics mentioned below were learnt by students and the software plans and drawing tools were practised by them.

1. Introduction to Clash Detective Test in Navisworks
2. Types and Applications to Different Clash types in Navisworks Manage
3. Switch Back option
4. Assigning Clash Detective Test
5. Resolving Clashes
6. Exploring different Report formats
7. Project Phase 3- Resolving Clashes and providing a Coordinated Model.



DAY 6 [11.11.2024, FN]

The Day 6 Training session started at 9.30 AM and the following topics were interacted with students in FN Session to update their basic skill sets to meet the corporate requirements.

1. Project Phase 3 – Continuation
2. Documentation and Sheet Setting of Coordinated Model
3. Exporting Coordinated Files
4. Certificate Distribution

At the end of the training program, certificates were issued to students by Dr. Kishore P – Director, Habilete Learning Solutions Pvt. Ltd, Kollam”. Ronnie George Philip – Operation Manager, Ericsson Global Services India.

Students Feedback: Students those who participated in this 6 days training program, have given their Oral feedback in front of Company Director that, this training program was really useful to them for their career and placement purpose. Trainers and Resource person informed that, students should keep on practising it daily at-least hour for day-to-day practice in Revit 3D Modeling.



Vote of Thanks:

As Concluding remarks, Mr. Vinothkumar.R, Faculty Co-ordinator of this training program, proposed a vote of thanks to the resource person, HoD for attending the function. He extended his thanks to the Principal and the Management for their support in conducting the training program. He thanked the two trainers and resource person for delivering the hands-on workshop. He also greeted the participants for taking part in the event actively.

Feedback from Students:

