KARNATAK LAW SOCIETY'S

GOGTE INSTITUTE OF TECHNOLOGY

UDYAMBAG, BELAGAVI-590008

(An Autonomous Institution under Visvesvaraya Technological University, Belagavi)

(APPROVED BY AICTE, NEW DELHI)

SKILL LAB

FOR

5th Semester Civil Engineering Students

DEPARTMENT OF

CIVIL ENGINEERING

KLS GOGTE INSTITUTE OF TECHNOLOGY

Building Information Modelling in Autodesk REVIT

FOR

Students of 5th Semester

Overview

Building Information Modelling (BIM) is a collaborative process that uses digital models and software tools to manage information throughout a building's lifecycle. Autodesk Revit software helps in planning, designing, building and managing a design or project based on a single building information model.

Mode of Conduction of each Module

Theory: 00 Hours
Demo: 00 Hours
Lab Sessions: 30 Hours
Total duration: 30 Hours
Certification exam: 04 Hours

Module 1: Introduction to modelling in Revit

- Introduction to BIM and Revit
- Starting a new project
- Creating walls and adding doors, windows and openings
- Working with editing tools

Module 2: Creating a building model in Revit

- Grids and levels
- Adding floors, roofs, ceilings
- Adding stairs, ramps and curtain walls

Module 3: Adding details for drawings and reports

- Adding site features
- Adding annotations and dimensions
- Creating project details
- Creating drawing sheets and plotting

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Module 4: Visuals and work sharing

- Rendering and 3D views
- Walkthroughs
- Work sharing concepts

Coordinators

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Outcomes

1. Understand and apply concept of BIM
2. Prepare an information model for a building in Revit to obtain drawings and reports
3. Rendering and creating walkthroughs for visualization of the model

Acceptance

In order to accept and start the training program, students are required to register with the respective department. Details to be provided by the student to the department include:

Name, USN, UID, Mobile No, Email id

Terms and Conditions

- Only students who have paid a skill lab fee to the institution are eligible for the training.
- The students must maintain 90% attendance for obtaining the skill lab certificate.
- Students must attend training as per scheduled time

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SKILL LABS

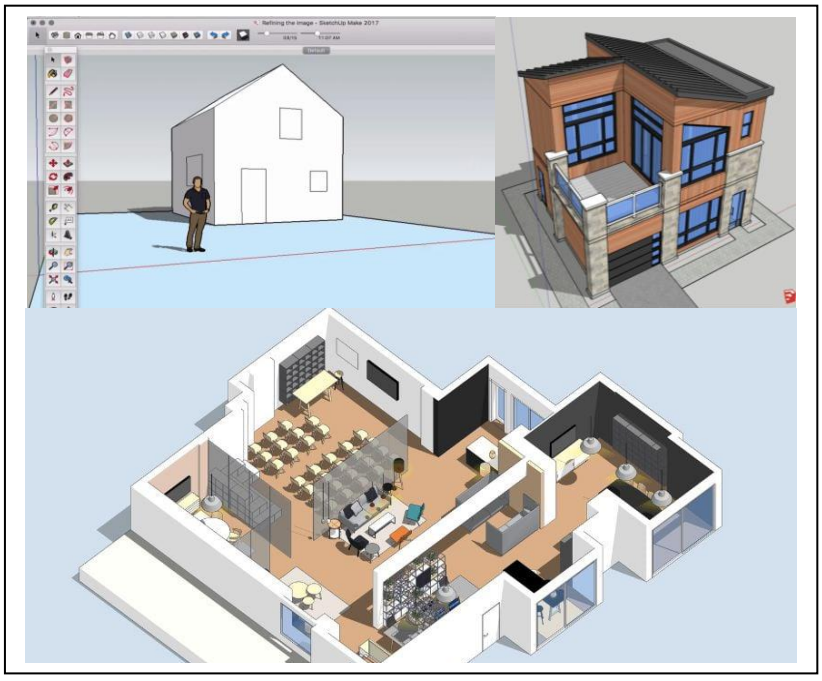
FOR

3rd Semester Civil Engineering Students

DEPARTMENT OF

CIVIL ENGINEERING.

KLS GOGTE INSTITUTE OF TECHNOLOGY



SketchUp for Civil Engineering Applications

FOR

Students of 3rd Semester

Overview

The Skill Lab on SketchUp is designed to equip civil engineering students with practical knowledge of 3D modeling and visualization techniques using SketchUp, a widely used software in architecture, construction, and urban planning. This lab provides hands-on experience in creating accurate 3D models, applying textures, visualizing designs, and using advanced tools to enhance the realism of civil engineering projects. Students work on real-world scenarios such as designing buildings, site layouts, and civil structures.

Mode of Conduction of each Module

Theory: 00 Hours
Demo: 10 Hours
Lab sessions: 26 Hours
Total duration: 36 Hours
Certification exam: 03 Hours

Module 1: SketchUp and Interface

- Overview of SketchUp software in civil engineering.
- Navigating the user interface.
- Basic tools: Line, Rectangle, Circle, and Push/Pull commands.
- Creating simple 2D shapes and extruding into 3D.
- Understanding axes, inferences, and measurements.

Module 2: Creating 3D Models of Buildings

- Drawing and modeling walls, doors, and windows.
- Using layers and groups for organization.
- Applying textures and materials to surfaces.
- Introduction to the 3D Warehouse and importing components.
- Basic lighting and shadow settings.

Module 3: Site Planning and Terrain Modeling

- Importing CAD plans into SketchUp.
- Creating terrain models using the "Sandbox" tool.
- Modeling topography and understanding elevation data.
- Incorporating site elements like roads, vegetation, and water bodies.

Module 4: Structural Modeling and Visualization

- Creating structural elements: beams, columns, and slabs.
- Modeling civil structures like bridges and retaining walls.
- Introduction to section cuts and section planes for internal views.
- Exporting models for construction drawings and presentations.
- Basics of rendering with SketchUp's built-in tools

Coordinators

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Outcomes

By the end of the workshop, students will have a foundational understanding of SketchUp for creating detailed 3D models relevant to civil engineering, along with skills to apply these models for presentations, site planning, and technical visualizations

Acceptance

In order to accept and start the training program, students are required to register with the respective department. Details to be provided by the student to the department include: **Name, USN, UID, Mobile No, Email id**

Terms and Conditions

- Only students who have paid a skill lab fee to the institution are eligible for the training.
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