Introduction to Revit and BIM

- **Understanding BIM**: What BIM is and its advantages in the AEC (Architecture, Engineering, and Construction) industry.
- **Revit Interface**: Navigating the Revit user interface, including the Ribbon, Project Browser, Properties Palette, and View Cube.
- **Project Setup**: Starting new projects, creating and modifying levels and grids, setting up project units, and creating discipline views.
- **Linking and Coordination**: Linking architectural and structural models, understanding copy/monitor, and managing linked files for interdisciplinary coordination.

Electrical System Modeling

- **Electrical Settings**: Configuring electrical settings, voltage definitions, distribution systems, and specifying demand factors and load classifications.
- **Placing Electrical Components**: Adding electrical equipment (panels, transformers), lighting fixtures (ceiling lights, wall lights), and various electrical devices (receptacles, switches, data outlets, communication devices, fire alarm systems, security systems).
- **Circuiting**: Creating and modifying electrical circuits, connecting fixtures and devices to panels, and understanding circuit numbering.
- **Cable Trays and Conduits**: Modeling cable trays and conduits, defining routing preferences, and adding fittings and accessories.
- **Wiring**: Adding wires to electrical circuits and creating detailed wiring diagrams.

Documentation and Analysis

Views and Sheets

- **Creating Views**: Generating different types of views (floor plans, ceiling plans, sections,

3D views) specific to electrical design.
- **View Templates and Overrides**: Applying and assigning view templates, and using visibility/graphic overrides to control element appearance.
- **Sheets and Printing**: Setting up sheets, placing views on sheets, adding title blocks, and printing drawings to various formats.

Annotation and Schedules

- **Dimensions and Text**: Adding dimensions, text, and other annotations to drawings.
- **Tags and Symbols**: Using tags for electrical fixtures and equipment, and creating and modifying annotation symbols.
- **Schedules**: Generating electrical panel schedules, lighting schedules, and equipment schedules to extract and present project information.

Analysis

- **Load Calculations**: Performing electrical load calculations for various systems.
- **Lighting Analysis**: Conducting conceptual lighting analysis to determine light levels.
- **Interference Detection**: Performing clash detection with other MEP disciplines (mechanical and plumbing) and generating interference reports.

Advanced Topics and Collaboration

Family Creation

- **Understanding Families**: Working with Revit families for electrical components, understanding type and instance properties.
- **Creating and Customizing Families**: Learning to create parametric electrical families, annotation families, and adding parameters to meet project needs.
- **MEP Connectors**: Defining and configuring electrical connectors within families.

Collaboration and Project Management

- **Worksharing**: Understanding worksharing concepts, creating and managing central and local files for team collaboration.
- **Export and Import**: Exporting Revit models to different formats and importing external files.
- **Project Standards**: Transferring project standards between Revit projects.
- **Design Options**: Utilizing design options for evaluating alternative design solutions.

This syllabus typically prepares individuals for roles such as BIM Electrical Modeler, Electrical Design Engineer, MEP BIM Coordinator, and Electrical Drafter. It's often recommended that participants have a basic understanding of electrical engineering concepts and terminology before undertaking a Revit Electrical course.