Revit MEP Essentials
3-5 Day** Training Course

Overview
The primary objective of this course is to teach students the concept of building information modelling and introduce the tools for parametric engineering design and documentation using Revit MEP. Students will learn the recommended workflows and basic skills required to navigate Revit MEP.

Day 1 & 2: Revit MEP Essentials
Day 3: Discipline: Mechanical
Day 4: Discipline: Electrical
Day 5: Discipline: Plumbing/Public Health

Prerequisites
• It is recommended that delegates are Microsoft Windows proficient.
• No previous CAD experience is necessary.

Software
• Revit 2020

What’s Included?
• Course Notes & Stationery*
• Computer and software for the duration of course*
• Coffee, Tea & Delicious Lunch*
• WiFi Access*
• Autodesk Certified Instructor
• Internationally recognized Autodesk Authorized Training Certificate

* Pertains to in-class training only
** In-class training typically occurs over a 3-5 day period, customised training may differ

Course Content

REVIT IN A NUTSHELL
• Interactive exercise on creating systems, Mechanical and Electrical

INTRODUCING REVIT AS A BIM TOOL
• What is BIM and what does it mean?
• The benefits of BIM What will BIM deliver?
• Industry drivers
• Introducing Levels of BIM
• Implications on team and workflow; fee and deliverables; contract and insurance issues

PROJECT NAVIGATION AND VIEW CREATION
• Interactive session introducing the menu & screen layout
• Interrogating the model to extract views
  - Plans, sections and elevations
  - Displaced views, callouts and drafting views
  - 3D isometrics, perspectives and walkthrough movies
• Placement and properties of grids, levels and dimensions
• Introduction to basic
• Revit elements

BASIC SCHEDULES AND LEGENDS
• Generation of tabular interrogations of the model
  - Scheduling Components
  - Style schedules
  - Legends
• Exercise on creating a schedule and legend

MECHANICAL SYSTEMS
• Mechanical settings
• Duct types and fittings
• Creating duct and piping systems Insulating and lining ductwork
• Plant and equipment
• Mechanical pipework, flanges and fittings
• Exercise on completing and checking a ventilation system
Course Content

- Exercise on creating levels, grids and using dimensions and scope boxes Element Selection and Manipulation
- Interactive session intro to object selection methods
- Element properties and manipulation
- Instance and Type parameters
- Modify tools, Nodes and Snaps
- Exercise on basic editing tools, trim, offset, align, etc

**VISIBILITY CONTROL AND CATEGORISATION**
- Project-Wide Settings
- View Specific Overrides
- Element Specific Overrides
- Individual Line Overrides
- Exercise on modifying element visibility

**MODEL DEVELOPMENT METHODOLOGY**
- Is BIM just about 3D?
- Information timeline and overload
- How a project develops from a base template
- The complexity of components
- Controlling graphical display

**ESTABLISHING A PROJECT**
- Project units - Common, HVAC, Electrical and Piping
- MEP settings, symbols and schematic design
- Project commencement and collaboration
- Linking CAD and Revit Architecture
- Coordination review
- Exercise on linking a Revit Architecture model and using copy/monitor tools

**INTRODUCTION TO BUILDING ELEMENTS**
- Basic wall definitions, floors, roofs and ceilings
- Sketching rules and relating slabs to walls and supports
- Slab slopes, roof design and ceiling definition
- System family editing
- Column and beam placement
- Exercise on element placement techniques and developing a composite wall

**EQUIPMENT, FIXTURES AND FITTINGS**
- Family terminology
- Component placement
- Selecting the correct level - FFL, SSL, Floor Soffit and Ceiling Soffit
- MEP workflow
- Exercise on hosted elements, visibility controls and multi-storey design

**INTRODUCING SYSTEMS**
- Setting up the project profile
- Main systems - Mechanical, Electrical and Piping
- System browser, connectors and other air systems
- Exercise on creating a system generated air supply layout

**ELECTRICAL SYSTEMS AND CIRCUITS**
- Equipment, devices and fixtures
- Wiring, cable tray and conduit modelling
- Circuits and switch systems
- Exercise on electrical service type filters & their use

**PLUMBING SYSTEMS**
- Plumbing settings
- Plumbing fixtures
- Creating plumbing systems
- Creating sanitary systems
- Domestic hot and cold-water systems
- System browser
- Exercise on creating a sanitary system, a piping system and a system type filter

**SPACES, ZONES, AREAS AND VOLUMES**
- Differentiate between spaces, zones, areas and volumes
- Defining spaces, bounding elements, tags and schedules
- Computation for areas and volumes
- Using space data outside of Revit
- Colour schemes and legends
- Exercise on creating and manipulating spaces

**2D DRAUGHTING AND ANNOTATION**
- Introducing annotation tools and component categories
- Detail component libraries
- Repeating details
- Lines and arcs
- Text, Tags and keynotes
- Exercise on generating and annotating a construction detail

**SHEET COMPILATION AND PUBLICATION**
- Project browser organisation – WIP and Publish
- Creating and populating sheets
- Working with schedules
- Publishing and document management

**BASIC SUBDIVISION AND COLLABORATION**
- Introducing a BIM Strategy
- Document Model management
- Project team collaboration techniques
- Transmittal and model issue protocols
- Basics of large-model sub-division

**INTRODUCTION TO THE PRINCIPLES OF FAMILY EDITING**
- The basic process 10 stages for trouble-free family creation
- Exercise on defining a fully parametric mechanical component
Course Registration Form

Please complete, sign and return together with proof of payment to mgfxsales@mgfx.co.za or fax 086 694 9404

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Micrographics SA (Pty) Ltd
Bank Details

Terms & Conditions:

1. Above Pricing Excludes VAT.
2. Students are to be at the training venue by 08h00 in preparation for a 08h30 start time.
3. Bookings can only be considered confirmation on receipt of payment.
4. Bookings may be changed up to three weeks in advance of the course. A fee of 20% will be levied to cover charges.
5. For full day courses, we will supply you with the relevant training material. A desktop computer to use for the training (where applicable) tea/coffee and a full lunch for full day InClass training hosted at the training center only. Catering is not included for OnSite training and laptop is available for hire at an additional cost if required.
6. Cancellation or rescheduling requests must be in writing and reach us at least 5 (five) working days prior to the course commencement date. Full course fees may be retained for no shows or requests within 5 working days prior to commencement.
7. Although we go to great lengths to ensure that all training proceeds as scheduled, we reserve the right to cancel or postpone dates if we require to do so and undertake to inform clients in writing and telephonically of these changes.
8. We suggest clients wait until a week prior to course commencement that a course has been confirmed to go ahead as scheduled before booking flight and accommodation. We are NOT responsible for cost associated with cancellation of classes such as flight and accommodation for clients.
9. Full training fees will apply if the above condition is not complied with.

Signed & Accepted

Name

Location