

AutoCAD 2D

- Introduction
- File management
- Orthographic drawings
- View management
- Display management
- Layer management
- Selection methods
- Parametric drawings
- Symbol creation using block
- BOM / Joinery details creation
- Isometric drawings
- Perspective drawings
- Annotations and Dimensions
- Team work
- Layout management
- Publish and Plot

Duration: 60 hours

Courseware Issued

AutoCAD Reference Guide
With Workbook

MicroStation

- Introduction
- Understanding the interface
- MicroStation workflow
- Working with views
- Creating and modifying elements
- Annotation tools
- Dimensioning
- Working with levels
- Working with references
- Printing methods

Duration: 60 hrs

Courseware Issued

MicroStation Reference
Guide

AutoCAD 3D

- 3D modelling concepts in AutoCAD Understand and use viewpoint and UCS
- Wireframe modelling
- Solid modelling & editing
- Mesh modelling & editing
- Surface modelling & editing
- Create & manage 2D views from 3D models
- Materials, lights & rendering
- Working with images

Duration: 30 hours

Courseware Issued

AutoCAD Reference Guide
With Workbook

Creo

- Pro/ENGINEER concepts
- Using the Pro/ENGINEER interface
- Creating sketcher geometry
- Creating extrudes, revolves, and ribs
- Selecting and editing
- Creating datum features
- Utilizing internal sketches and embedded datums
- Creating sweeps and blends
- Creating holes and shells
- Creating rounds, chamfers and drafts
- Variable section sweeps, helical sweeps and swept blends
- Creating patterns
- Group, copy, and mirror tools
- Measuring and inspecting models
- Advanced reference management
- Relations and parameters
- Layers, family tables & UDF
- Assembling with constraints
- Exploding assemblies
- Creating surface features
- Editing surface features in Pro/ENGINEER
- Creating drawing views
- Creating drawing details
- Using advanced assembly constraints
- Creating and using component interfaces
- Creating and using flexible components
- Using assembly features and shrink/wrap
- Replacing components in an assembly
- Understanding simplified reps
- Creating cross-sections, display styles, and combined views
- Substituting components by rep, envelope, and model
- Primary walls, secondary and unattached walls
- Unbend, bend back and cuts
- Notches and punches
- Sheet metal forms
- Bending & Unbending sheet metal geometry
- Converting solid parts
- Sheet metal drawings with flat states and bend order table
- GD&T

Duration: 60 hours

SolidWorks

- Sketcher basics
- 3D sketching
- Part modelling
- Creating reference geometries
- Editing features
- Advanced modelling tools
- Configuration
- Design table/library features
- Import/export of files
- Surface overview
- Bottom-up assembly
- Top-down assembly
- Exploding assemblies
- Simulation/ Detailing
- BOM, balloon tools
- Sheet metal
- PDM Works
- Weldment
- GD&T

Duration: 60 hours

Courseware Issued

Creo Reference Guide with Workbook

Courseware Issued

SolidWorks Reference Guide with Workbook

ANSYS

- Introduction to engineering
- Design
- Different types of numerical methods & applications
- Practical applications of FEA
- Basics of finite element method (FEM)
- Analytical method to solve any mechanics problem
- Theoretical FEM procedure to solve above mechanics problem
- Theories of failure
- Basic linear & torsional equation
- Getting started with ANSYS
- CAD modelling Using ANSYS
- Introduction to meshing

Courseware Issued
ANSYS Reference Guide

Duration: 60 hours

PPM Concepts

- Instructions to project planning and management
- What is a project?
- What is project management?
- Project management context
- Project Lifecycle
 - 4 Initiation
 - 4 Planning
 - 4 Execution
 - 4 Controlling
 - 4 Closure
- Integration management
- Communication management

Courseware Issued
PPM Concepts Reference Guide

Duration:16 hours

MS Project

- Activity, calendars - definition, sequencing & estimation duration
- How to develop a schedule plan and control
- Network analysis - CPM,
- PERT, PDM
- How to prepare work breakdown structure (WBS)
- How to update WBS
- Constraints
- How to manage cost in a project
- How to do resource planning and cost estimation

Duration: 30 hours

- How to define resource pool and to allocate resources
- Filters and grouping
- How material resources are being allocated
- Analysing resources by levelling the resource using crashing, stretching & splitting
- Earned value analysis
- Method of developing different types of reports according to industrial needs
- Scheduling in multiple projects
- Customisation
- Project

Courseware Issued

MSP Reference Guide with Workbook

Primavera

- Calendars - defining hourly & daily calendar, weekly, monthly
- Activities - definition, sequencing & estimating duration
- Effectively using the four types of PDM relationship
- Scheduling the project
- Monitoring & project controlling
- Defining constraints & overcoming conflicts
- Defining & assigning activity codes
- Defining & assigning WBS codes
- How to organise the activities by using activity codes & WBS codes
- Reorganizing activities
- Filtering activities
- Defining project codes
- Preparing resource information
- How to apply resource to each activity
- Estimating the cost of the project
- How to analyse the resource by using resource profile & resource table.

- How to do resource levelling & resource smoothing using crashing, stretching & splitting
- Scheduling multiple projects & preparing a master project
- Updating the project progress & comparing the actual progress with the baseline
- Earned value management
- Preparing different types of reports
- How to prepare 'S' curve
- Highlighting the progress in the bar chart
- Application of global change

Courseware Issued

Primavera Reference Guide with Workbook

Duration: 40 hours

OrCAD Capture

- Schematic development
- Part editor
- Simple and complex hierarchy projects
- Annotation
- Cross reference parts report generation
- Property editor
- Multiple schematic project
- Component information system
- Bill of material report generation

Duration: 40 hours

Courseware Issued

OrCAD-Capture & PCB Editor
Reference guide
With Workbook

OrCAD PCB Editor

- Schematic modification for PCB design
- Physical rule check
- Pad designer
- Package symbol & Package symbol wizard
- Template board file creation
- PCB editor netlist creation
- Page configuration
- Script file creation
- Constraint manager
- Visibility control
- Component placing (Floor planning)
- Routing
- Design processing for artwork file creation
- Artwork/Gerber file creation

Duration: 40 hours

Courseware Issued

OrCAD-Capture & PCB Editor
Reference guide
With Workbook

OrCAD PSpice

- Schematic modification for simulation
- Electrical rule check
- PSpice netlist creation
- Stimulus editor
- Model editor
- Bias point analysis
- Transient analysis
- DC sweep analysis
- Temperature sweep analysis
- Parametric sweep analysis
- Monte Carlo worst case analysis
- Single window and multi window display system
- Macros
- AC sweep analysis

Courseware Issued
OrCAD PSpice Reference
guide
With Workbook

Duration: 32 hours

Pro-Steel

- Introduction
- Structural Steel Detailing
- Creating Workframe
- Display Classes
- Area Classes
- Part Families
- Shapes
- Catalog Selection
- Placing shapes using various methods
- Modify Tools
- Endplate connection
- Plates
- Plate Modeling
- Plate Funnel
- Element Modifications
- Divide
- Connect
- Notch
- Drill
- Bolt
- Bracing
- Static
- Dynamic
- Gusset Plate
- Purlin
- Purlin connection
- Web angle connection
- Shear Plate connection
- Structural Elements
- Purlin
- Purlin connection
- Web angle connection
- Shear Plate connection
- Structural Elements
- Hand rail
- Straight Stairs
- Portal Frame
- Trusses
- Custom Shape Creation
- User Shape
- Parametric Shape
- Combined Shape
- Elevation Flag
- Weld Symbols
- Benchmark
- Part List
- Detail Center
- Detail Styles
- Detail Center Composer
- 2D Cut
- Dimensioning
-

Courseware Issued
Pro-Steel Reference guide

Duration: 60 hours

Civil 3D

- Introduction
- Working Environment
- Working with Point Data
- Survey
- Surface
- Viewing a Surface in 3D
- Site Design Parcel
- Site Design Alignment
- Site Design Profiles
- Site Design Grading and Quantities
- Site Design Pipes
- Transportation Alignment
- Transportation Assemblies and Corridors
- Transportation Sections and Quantities
- Manage Data

Duration: 60 hours

Courseware Issued

AutoCAD Civil 3D Reference guide

ArchiCAD

- Introduction to BIM and ArchiCAD
- Multi-storey Settings
- Using Wall Element
- Placing building elements from Library
- Creating Wall Holes
- Creating new Library Elements
- Floor and Roof Designs
- Annotation and Dimension
- Documentation and Scheduling
- Present the Project with images and walkthroughs
- Construction Simulation
- Layout Setting and Plotting

Duration: 60 hours

Courseware Issued

Archicad Reference guide

Staad Pro

- Introduction to Structural Design
- Introduction to STAAD.Pro
- Model generation
- Assigning loads
- Automatic load generation
- Analysis and Analysis Results
- Introduction to FEM / FEA
- Projects using FEM / FEA
- Report Generation
- Concrete Design
- Steel Design
- Interactive designs

Duration: 60 hours

Courseware Issued

Staad Pro Reference guide with workbook

MX-Road

- Introduction
- MXROAD key features
- Basic concepts
- CAD Environment
- View controls in MX
- CAD tools
- Survey inputs and validation
- General procedure (GENIO file)
- String names and drawing styles
- Survey input: (ASCII format) Excel
- Survey input : LiDAR
- Status: Deriving information from display
- Model analysis
- Edit models
- Edit strings
- Edit points
- Surface analysis
- Dynamic surface analysis
- File management
- String naming convention
- Design- quick alignment
- Design- Vertical profile
- Design- alignment by element method
- Best fit alignment
- Road design- carriageways
- Rule based super elevation
- Cross fall checker
- Road design- road widening
- Dynamic reports
- Junction design
- Road design- shoulder design
- Road design- kerbs, verges and footways
- Earthwork design
- Pavement and sub grade design
- Dynamic section
- Final Drawings Manager
- Final Drawings Manager
- Road Re-design and Rehabilitation
- Overlay design -Template method
- Testing a design
- Composite model
- Visibility

Duration: 60 hours

Courseware Issued

MX-Road Reference guide

ANSYS Civil

- Introduction
- CivilFEM Setup
- Element Type – Beam
- Material Explorer
- Cross Section Explorer
- Beam Property
- Modelling in ANSYS
- Loads
- Solve
- Civil Post processing
- LS Files
- Load Combination
- Concrete Design
- Modelling
- Slab Design
- Prestressed Concrete Design
- Bridge Design
 - Bridge Section
 - Bridge Modelling
 - Looping statement: DO &End do
 - Vehicle Load Creation
- Geotechnical Module
- Seismic Design
- Steel Design

Duration: 60 hours

Courseware Issued

ANSYS Civil Reference guide

PC Schematic

- How to create an electrical geometry
- What are conducting and non-conducting lines
- How to specify signals
- An introduction to electrical projects
- How to use routers
- Graphic terminal plan
- Cable plan
- How to create ground plans
- How to create isometric drawings
- How to use mouse chasing system
- Graphical connection plan
- How to use translator
- How to use project generator
- Projects

Duration: 40 hours

Courseware Issued

PC Schematic Reference guide

Revit Architecture

- Introduction to BIM and Revit Architecture
- Project Settings
- Multi-storey Settings
- Complete a Plan by using different wall families
- Designing Complex walls and Wall Profiles
- Placing Doors, Windows and Components
- View and Camera Settings
- Designing Floors and Ceilings
- Placing Ceiling Components
- Placing Decals
- Interference Checking
- Customizing Project Settings
- Working with element groups
- Walkthrough video
- Rendering high quality Images

Duration: 60 hours

Courseware Issued

Revit Architecture Reference Guide

Revit MEP

- Revit MEP Basics
- Building Performance Analysis
- HVAC Systems
- Piping Systems
- Plumbing Systems
- Fire Protection Systems
- Electrical Systems
- Working with Architects and Engineers
- Detailing and Drafting
- Annotations and Schedules
- Construction Documentation

Duration: 60 hours

Courseware Issued

Revit MEP Reference Guide

PDMS

- Introduction of piping
- Getting started - PDMS
- Equipment modeling
- Introduction
- Theory and procedure of component & equipment
- Modifying equipment
- Positioning equipment
- Editing equipment
- PIPE WORK
- Creating pipes
- Connecting the
- Creating walls and floors
- Modifying walls and floors
- Positioning walls and floors
- Orientating walls and floors
- Connecting walls and floors
- STRUCTURE - ASL MODELER
- Creating ASL modeler
- Modifying ASL modeler
- HANGERS & SUPPORT
- Introducing PDMS Hangers and Supports
- Creating hangers and support
- elements
- Utilities
- Setting the geometry
- Creating the structure
- Utilities
- Settings
- STRUCTURE - PANELS AND PLATES
- Creating the panels and plates
- STRUCTURE - WALLS AND ROOF
- Modifying hangers and support
- Positioning hangers and support
- Connecting hangers and support
- HVAC
- Creating HVAC layouts
- CABLE TRAYS
- Creating components
- Modifying cabling system
- DRAFT MANAGER
- Iso-generation
- Spooler
- Report generation

Duration: 80 hours

Courseware Issued
PDMS Reference guide

Certificate Course in 3DS MAX

- Introduction - About Max
- Standard Primitives
- Transforms
- Using Absolute / Relative Transform Type-in dialog box
- Selection Types
- Co-Ordinate System
- Unit Setup
- Using Layer Manager
- Modifiers
- 2DShapes
- Compound Objects – Basics
- AEC Objects
- Cloning,
- 2D Editing
- Material – Basics
- Cameras
- Rendering– Mental ray

Duration: 60 hours

Courseware Issued
3DS MAX Foundation Reference guide

3DS MAX For Engineers & Architect

- Set modeler
- Interior and exterior Designer
- Visuals effects Artist
- Texturing and background Artist
- Design visualization Artist
- Lighting Artist
- Event Designer

Duration: 90 hours

Courseware Issued
MAX for Engineers/Arhitect Reference guide

PRIMAVERA Complete

- Project Management Life Cycle
 - Introduction about Project and its management.
 - Process Groups.
 - Primavera
 - P6 EPPM Suite.
 - GUI of P6 Release 8.2 web and client.
 - Initiating Process Group
 - Data Structure of Primavera
 - About Organizational Breakdown Structure
 - About Enterprise Project Structure
 - Planning Process Group
 - Projects
 - Calendars
 - Work Breakdown Structure
 - Relationship
 - Scheduling
 - Constraints
 - Codes
 - Roles
 - Resources & Its Team
 - Resource Plan
 - Assigning a Resource
 - Resource Analysis & Leveling
 - Baseline
 - User Defined Fields
- Budget
 - Execution Process Group
 - About Notebook, Feedback, Cost Accounts, Expenses
 - Update
 - Documents
 - Issues
 - Risk
 - Check in & Check out
 - Reflection
 - Monitoring & Control Process Group
 - Tracking
 - Views
 - Publish Project Website
 - Portfolio
 - Dashboards
 - Closing Process Group
 - Reports
 - Import & Export
 - Applications
 - Progress Reporter
 - Team Member

Duration: 64 hours

Courseware Issued
MAX for Engineers/Architect
Reference guide

AutoCAD Electrical

- Introduction
- Project
 - Introduction to Project Manager
 - Working with Projects
- Drawing
- Insert a Component
- Connecting a component
- Create a Library Symbol
- Symbol Builder
- Circuit Builder
- Save circuit to icon menu
- Component Tools
- Component Attribute Tools
- Wires
- Signal Arrows
- Ladder tools
- PLC
 - Generate PLC Layout Modules
 - PLC parametric selection
 - Module layout
 - Insert PLC modules
 - Edit PLC module
 - PLC Database File
- Point to Point Wiring Tools
 - Introduction to Connector Diagrams
- Grouping Wires
- Conversion tool
- Panel Layout
- Generate Reports

Duration: 30 hours

Courseware Issued

AutoCAD Electrical Reference guide

Building Estimation and Costing

- Introduction
 - Estimation
 - Quantity Takeoff
 - Autodesk Quantity Takeoff
- Understanding Workflow
- Graphical User Interface
- Additional Currencies
- Catalogs
- Preferences and Settings
- Organizing the Projects
- Work Breakdown Structure (WBS)
- Sheet Scales
- Manual Takeoff Tools
- Assembly
- Automatic Takeoff Tools
- Validate Takeoff Data
- Compare & Display

Duration: 24 hours

Courseware Issued

Building Estimation and Costing Reference guide with QTO

CATIA

- Sketcher basics
- 3D sketching
- Part modelling
- Creating reference geometries
- Editing features
- Advanced modelling tools
- Configuration
- Design table/library features
- Import/export of files
- Surface Design
- Bottom-up assembly
- Top-down assembly
- Exploding assemblies
- Simulation/ Detailing
- BOM, balloon tools
- Sheet metal
- PDM Works
- Weldment
- GD&T

Duration: 60 hours

Courseware Issued

CATIA V5 Reference Guide
with Workbook