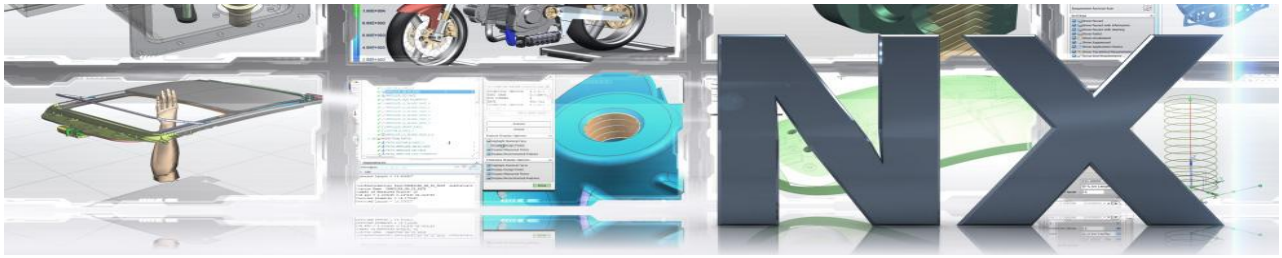

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Software Development & Education Center

SIEMENS | NX 8.5

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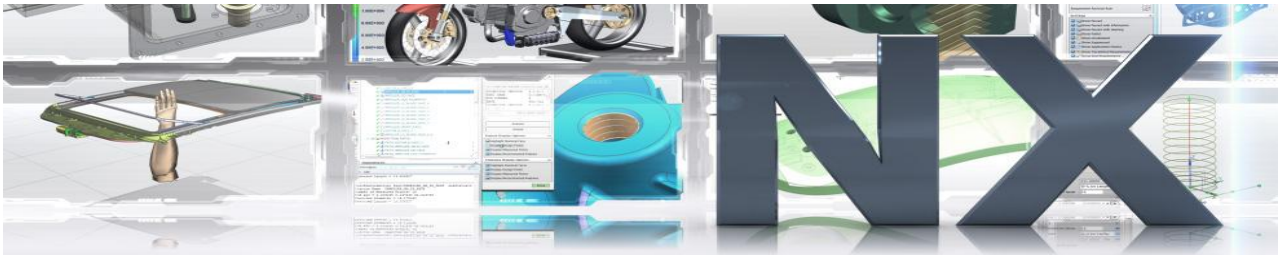


Detailed Curriculum

Overview

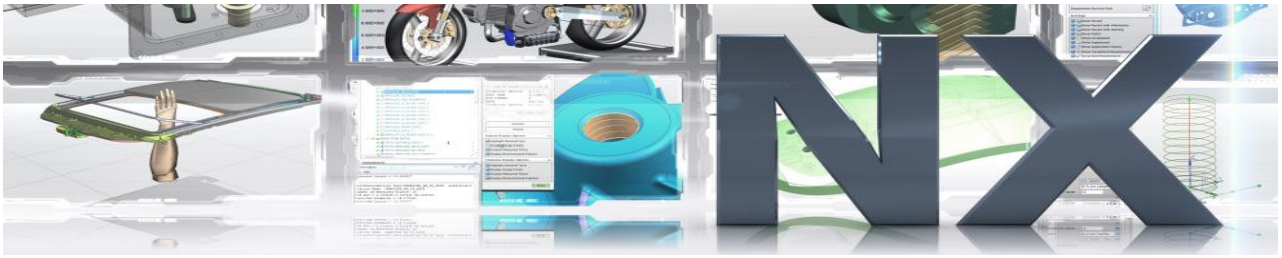
- Intended Audience
- Course Objectives
- Prerequisites
- How to Use This Course
- Class Standards
- Part File Naming
- Seed Parts
- Colors
- Definitions of Terms

Getting Started

- Starting NX
- Gateway Application
- Cue/Status Line
- Windows File Dialogs
- Activity — Creating a New Part
- Opening Multiple Parts
- Activity — Opening an Existing Part
- Activity—Save Part As (Copying a Part)
- Activity—Closing Parts
- Exiting NX
- Summary

The NX User Interface

- Toolbars
- Customizing Toolbars



- Roles
- Activity — Working with Toolbars
- Activity — Working with Roles
- Mouse Navigation
- Mouse Pop-up Menu
- Graphics Window View Manipulation
- Selecting Objects
- Preview Selection and Quick Pick
- Activity — Manipulating Views
- Summary

Coordinate Systems

- Overview of Coordinate Systems
- Manipulating the WCS
- Move WCS (Dynamics)
- Origin Handle
- Axis Handles
- Rotation Handles
- Activity — Manipulating the WCS
- Summary

Introduction to Solid Modeling

- Primitives
- Block
- Activity — Creating a Block
- Cylinder
- Defining Vectors
- Activity — Creating a Cylinder
- Summary

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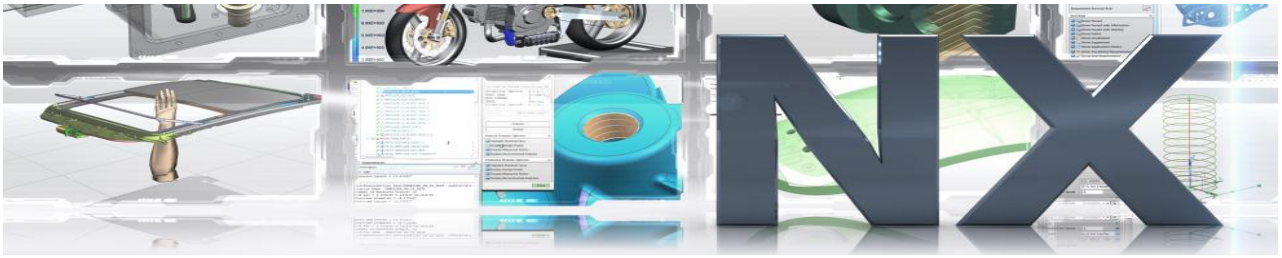
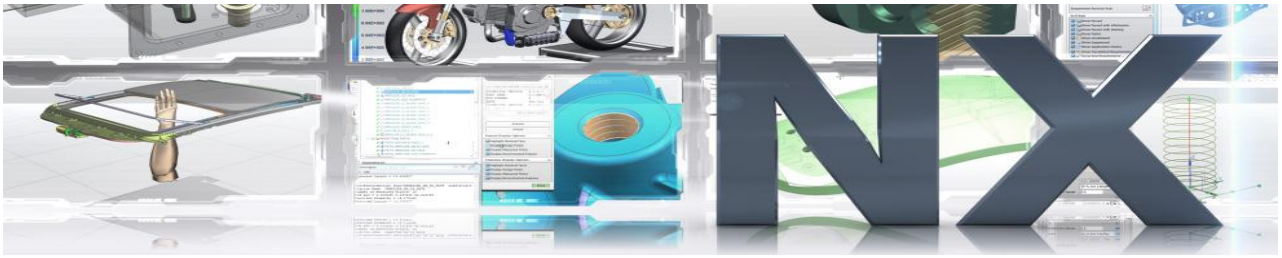


Positional Form Features

- Creating Form Features
- Hole
- Boss
- Positioning Terminology
- Positioning Methods
- Activity—Positioning Holes and Bosses
- Slot
- Pocket
- Pad
- Additional Positioning Methods
- Parameter Entry Options
- Activity — Creating Pockets and Slots
- Groove
- Activity — Positioning a Groove
- Editing the Size and Location of Form Features
- Edit Positioning
- Error Messages
- Editing Features with the Part Navigator
- Activity—Editing Positional Form Features
- Additional Positioning Techniques
- Summary

Expressions

- Overview
- Creating and Editing Expressions
- Activity — Getting Familiar with Expressions
- Summary



Shell

- Shell Feature Overview
- Creating a Shell Feature
- Activity — Creating a Shell Feature
- Activity — Creating a Shell and Removing Multiple Faces
- Activity — Creating a Shell with an Alternate Thickness
- Summary

Edge Operations

- Overview
- Edge Blend
- Activity — Creating Edge Blends
- Chamfer
- Activity — Creating Chamfers
- Summary

Model Construction Query

- Visually Inspect the Part
- Layers
- Layer Categories
- Moving Objects Between Layers
- Part Navigator
- Information
- Distance
- Mass Properties
- Activity — Model Construction Query
- Summary

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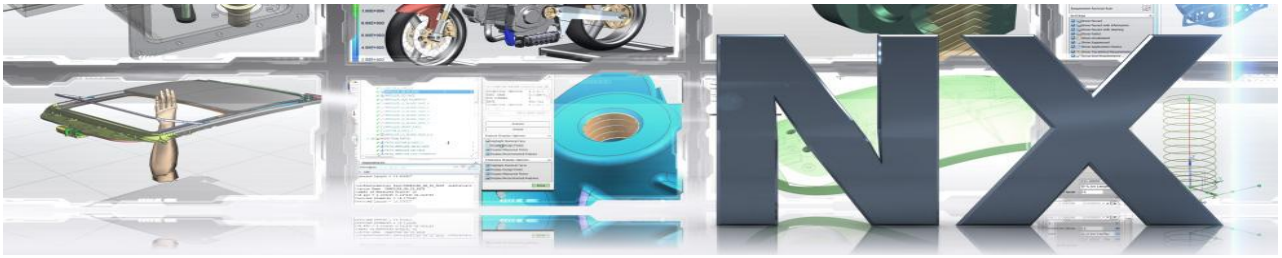

Introduction to Assemblies

- Definitions and Descriptions
- Introduction to Load Options
- Load Method
- Load States
- Load Failure
- Activity — Setting Load Options
- The Assembly Navigator
- Node Display
- Activity—Working with the Assembly Navigator
- Selecting Components in the Assembly Navigator
- Selecting Components in the Graphics Window
- Designing in Context
- Assembly Navigator Pop-Up Menu Options
- Activity—working with the Assembly Navigator (continued)
- Saving the Work Part
- Summary

Adding Components & Mating Conditions

- General Assembly Concepts.
- Assemblies Application
- Assemblies Pull-down Menu
- Assemblies Toolbar
- Adding Components to an Assembly
- Activity—Creating an Assembly
- Mating Conditions
- Mate Constraint
- Align Constraint

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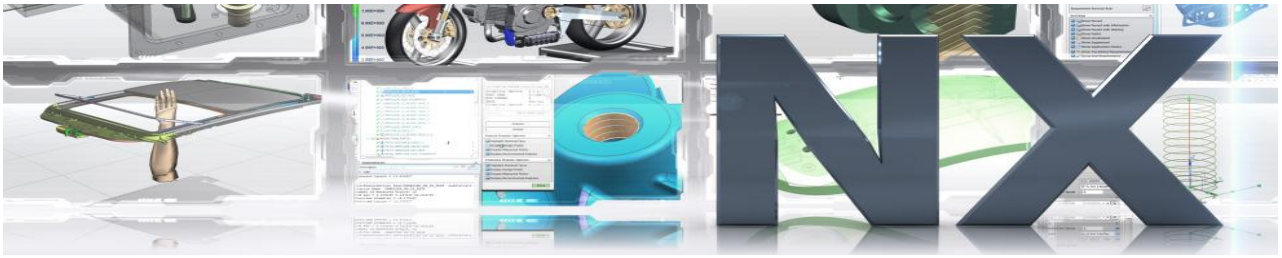
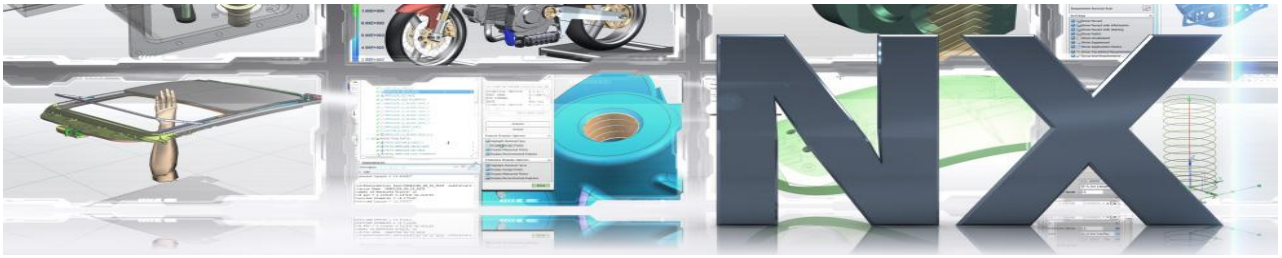


- Angle Constraint
- Parallel Constraint
- Perpendicular Constraint
- Center Constraint
- Distance Constraint
- Tangent Constraint
- The Mating Conditions Dialog
- Tree Listing
- Repositioning Components
- Activity—Mating the Nut Cracker Components
- Summary

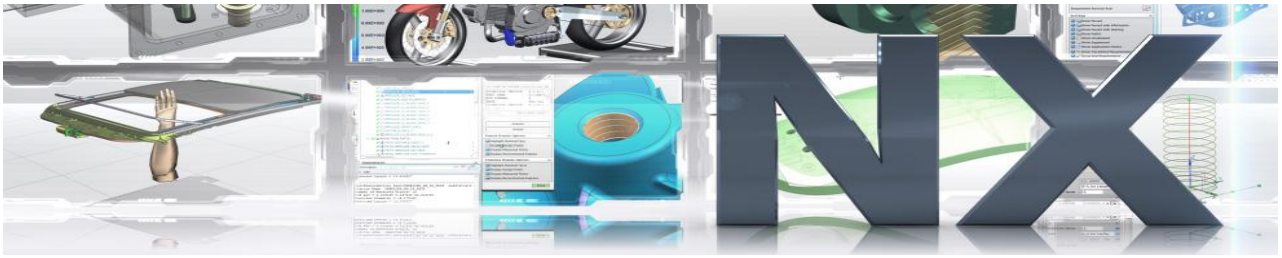
Datum Features

- Datum Feature Overview
- Datum Planes
- Creating Relative Datum Planes
- Common Datum Plane Types
- Activity—Creating Relative Datum Planes
- Selecting and Using Datum Planes
- Activity—Cylindrical Faces and Datum Planes
- Activity — Creating a Feature on a Relative Datum Plane
- Activity—Creating a Hole Corner to Corner
- Datum Axis
- Datum Axis Types
- Editing Datum Axes
- Activity—Constraining Locations using Datums
- Datum CSYS
- Summary



Sketching

- Sketching Overview
- Sketches and the Part Navigator
- Sketch Visibility
- Creating a New Sketch
- The Active Sketch
- Sketch Creation Steps
- Activity — Sketch Creation
- Sketch Curves
- Activity — Using the Sketch Profile Tool
- Creating Fillets
- Trimming and Extending Curves
- Activity — Creating Fillets
- Activity—Using Quick Trimand Quick Extend
- Sketch Points
- Dimensional Constraints
- Activity—Adding Dimensional Constraints
- Editing Dimensions
- Activity — Editing Sketch Dimensions
- Geometric Constraints
- Show/Remove Constraints
- Constraint Conditions
- Activity — Adding Constraints
- Activity — Constraining a Profile
- Activity — Sketching and Constraining a Gasket
- Convert To/From Reference
- Activity—Constraint Conditions



Swept Features and Boolean Operations

- Types of Swept Features
- Extrude
- Activity — Starting the Draglink
- Boolean Operations
- Start and End Limit Options
- Extrude with Offset
- Extrude with Draft
- Activity—Extruding with Offsets
- Selection Intent
- Activity — Extruding Using Selection Intent
- Sweep Along Guide
- Activity—Sweeping Along an Open Guide String
- Activity — Sweeping Along a Closed Guide String
- Revolve
- Activity—Creating Revolved Features
- Activity — Adding a Revolved Feature to the Draglink
- Activity — Extruding to a Face
- Summary

Editing the Model

- Accessing the Options to Edit Features
- Part Navigator
- Deleting Features
- Update Failures
- Activity — Edit and Delete Features
- Activity — Using the Update Tool
- Activity—Reordering Features with the Part Navigator

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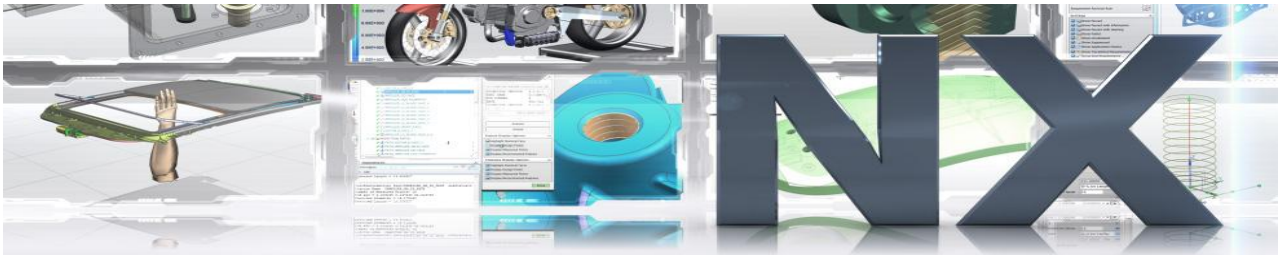

- Delaying Model Updates
- Move Feature
- Reattaching a Feature
- Activity—Re-attaching and Moving Features
- Summary

Instance Arrays

- Instance Feature
- Rectangular Instance Array
- Circular Instance Array
- Activity — Rectangular Instance Array
- Activity — Circular Instance Array
- Activity (Optional) — Associativity of the Rotation Axis
- Summary

The Master Model

- The Assembly Modeler
- Master Model Example
- Activity—Exploring a Master Model Assembly
- Activity — Creating a Non-Master Part
- Summary

Introduction to Drafting

- Working with Drawings
- Creating New Drawing Sheets
- Opening a Drawing
- Editing a Drawing
- Deleting a Drawing
- Activity — Creating New Drawing Sheets

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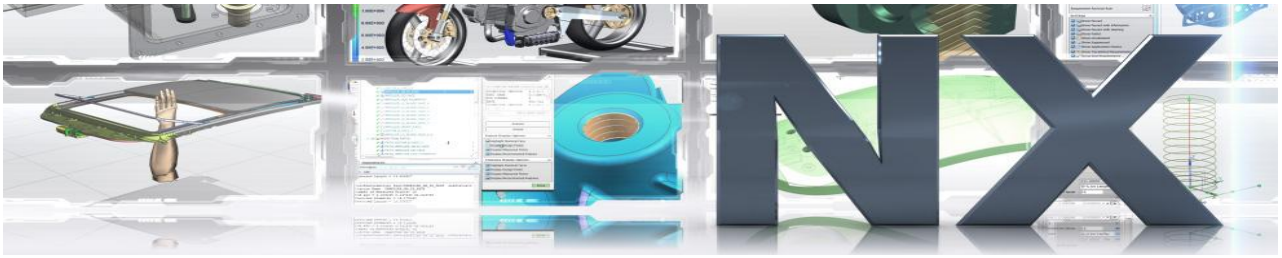
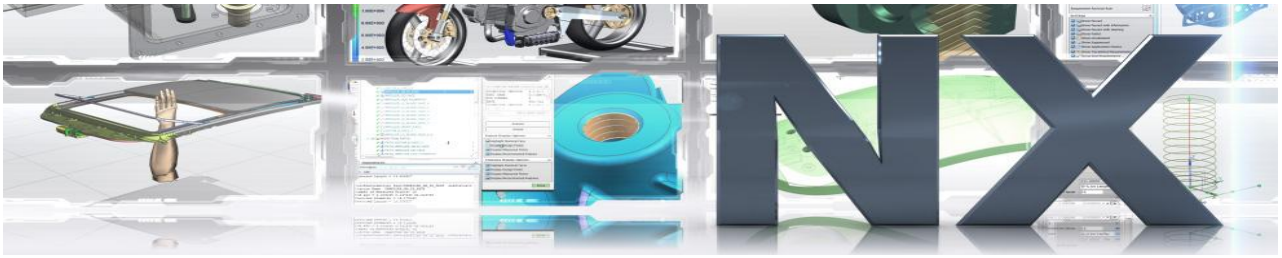


- Activity—Opening and Editing Drawing Sheets
- Drawing Monochrome Display
- View Preferences
- Hidden Lines
- Smooth Edges
- Virtual Intersections
- Adding a Base View
- View Creation Options Bar
- Adding Projected Views
- Editing Existing Views
- Removing Views From a Drawing
- Activity—Adding Views to a Drawing
- Utility Symbols
- Creating a Linear Centerline
- Activity—Creating a Linear Centerline
- Manually Creating a Cylindrical Centerline
- Activity—Creating a Cylindrical Centerline
- Dimensions
- Annotation Preferences
- Dimension Preferences and Placement
- Appended Text
- Tolerances
- Text Orientation and Text Arrow Placement
- Editing an Existing Dimension
- Activity — Creating Dimensions
- Text Creation
- Creating Notes
- Activity — Creating Notes and Labels



- The Annotation Editor
- Editing Notes
- Activity — Creating More Notes
- Master Model Drawing Guidelines
- Summary

Expression Operators

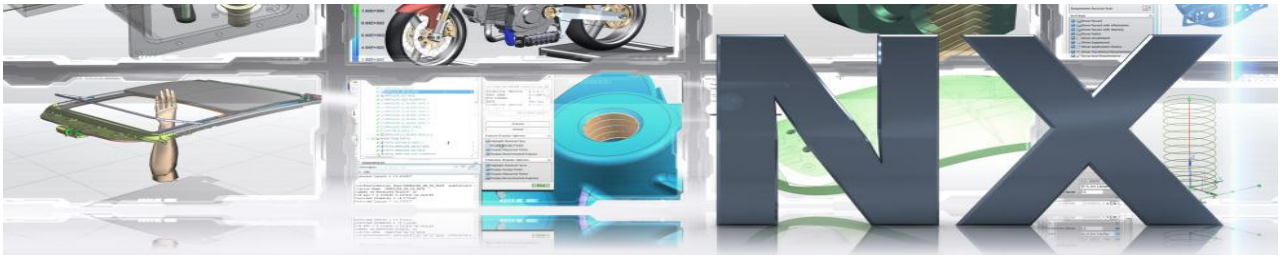
- Overview
- Operators
- Precedence and Associativity
- Legacy Unit Conversion
- Built-in Functions

Point Constructor Options

- Overview
- Methods to Specify a Point
- WCS and Absolute Coordinates
- Offset

Customer Defaults

- Overview
- Customer Defaults
- Customer Defaults Levels
- Setting Customer Defaults
- USER, GROUP, and SITE directories
- Managing Your Changes
- Updating to a New Release of NX



Training & Performance Tracking

Knowledge related to current technology aspects and corporate level deliverable & Continuous training and assessment to make you industry ready. Throughout the Training Curriculum Candidate will go through a Scheduled Assessment Process as below:

- Continues Assessments
- Practical Workshops
- Modular Assignments
- Case Studies & Analysis
- Presentations (Latest Trends & Technologies)
- Tech Seminars
- Technical Viva
- Observing live Models of various projects
- Domain Specific Industry Projects

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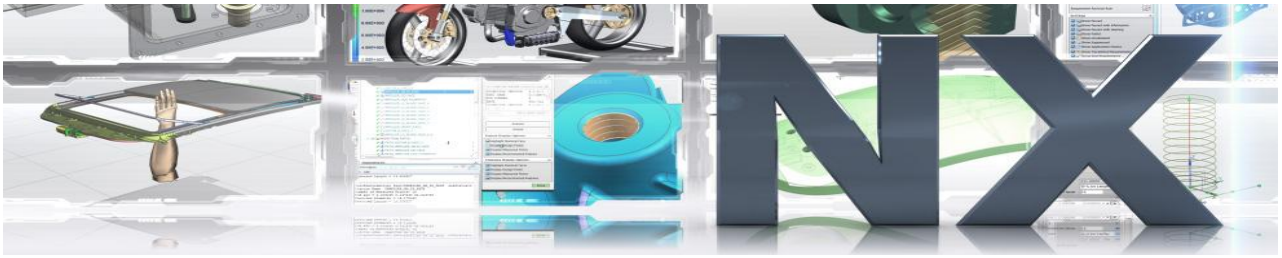

Skills Development Workshop

Communication is something which all of us do from the very first day of our life, yet there is a question that haunts us most of the time "Did I express myself correctly in such and such situation?" The answer to this question is really tricky, because in some cases we leave our signatures and good impression but in some others we even fail to get our idea clearly. It happens mostly because we don't know how to act in certain situations. Every time we fail we don't lose completely, we do learn something, but prior knowledge of the same thing could be more beneficial because then we could have turned that failure into success.

The course / workshop would focus at many aspects of personality, like:

- Building positive relationships with peers & seniors
- Building self-confidence & Developing clear communication skills
- Exploring and working on factors that help or hinder effective interpersonal communication
- Learning impacts of non-verbal behavior & Dealing with difficult situations and difficult people

Workshops Consists of Following Activities:

- Personality Development
- Group Discussions & Debates
- Seminars & Presentations
- Case Studies & Analysis
- Corporate Communication Development
- HR & Interview Skills
- Management Games & Simulations
- Aptitude, Logical & Reasoning Assessments & Development