



ObjectARX course.

Total Duration : 80hrs

ObjectARX course Curriculum	Hrs.
<ul style="list-style-type: none"> ▪ ObjectARX Introductory Concepts <ul style="list-style-type: none"> • Overview of ObjectARX <ul style="list-style-type: none"> • The ObjectARX Programming Environment <ul style="list-style-type: none"> • Accessing the AutoCAD Database • Interacting with the AutoCAD Editor • Creating User Interfaces with MFC • Supporting MDI • Creating Custom Classes • Building Complex Applications • Interacting with Other Environments • ObjectARX Class Groups • Getting Started <ul style="list-style-type: none"> • Software Development Environment and System Requirements • ObjectARX Directory Tree • Setting up an ObjectARX Project Using Microsoft Visual Studio • Database Primer <ul style="list-style-type: none"> • AutoCAD Database Overview <ul style="list-style-type: none"> • Multiple Databases • Obtaining Object IDs • Essential Database Objects • Creating Objects in AutoCAD • Creating Objects in ObjectARX <ul style="list-style-type: none"> • Creating Entities – createLine, createCircle 	4
<ul style="list-style-type: none"> • Practical 	6
<ul style="list-style-type: none"> <ul style="list-style-type: none"> • Creating a New Layer • Opening and Closing ObjectARX Objects • Adding a Group to the Group Dictionary • ObjectARX Application Basics <ul style="list-style-type: none"> • Creating an ObjectARX Application <ul style="list-style-type: none"> • Creating Custom Classes • Implementing an Entry Point for AutoCAD • Initializing an ObjectARX Application • Preparing for Unloading • Example Application • Creating LISP functions • Registering New Commands <ul style="list-style-type: none"> • Command Stack 	6

<ul style="list-style-type: none"> • Global versus Local Command Names • Transparent versus Modal Commands 	8
<ul style="list-style-type: none"> • Practical 	8
<ul style="list-style-type: none"> • Loading an ObjectARX Application • Unloading an ObjectARX Application • ARX Command • Running ObjectARX Applications from AutoLISP • Error Handling • Database Operations <ul style="list-style-type: none"> • Initial Database • Creating and Populating a Database • Saving a Database <ul style="list-style-type: none"> • Setting the Default File Format • The wblock Operation <ul style="list-style-type: none"> • Creating a New Database from an Existing Database • Creating a New Database with Entities • Inserting a Database • Setting Current Database Values <ul style="list-style-type: none"> • Database Color Value • Database Linetype Value • Database Linetype Scale Value • Database Layer Value • Example of Database Operations • Last Saved by Autodesk Software • Database Objects <ul style="list-style-type: none"> • Opening and Closing Database Objects • Deleting Objects • Database Ownership of Objects • Adding Object-Specific Data - Extended Data • Extension Dictionary - ObjectARX Extension Dictionary Example, Global Function Extension Dictionary Example • Erasing Objects • Object Filing 	4
<ul style="list-style-type: none"> • Practical 	8
<ul style="list-style-type: none"> • Entities <ul style="list-style-type: none"> • Entities Defined • Entity Ownership • Common Entity Properties <ul style="list-style-type: none"> • Entity Color • Entity Linetype • Entity Linetype Scale • Entity Visibility 	4

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<ul style="list-style-type: none"> • Entity Layer • Common Entity Functions • Creating Instances of AutoCAD Entities <ul style="list-style-type: none"> • Creating a Simple Entity • Creating a Simple Block Table Record • Creating a Block Table Record with Attribute Definitions • Creating a Block Reference with Attributes • Iterating Through a Block Table Record • Complex Entities <ul style="list-style-type: none"> • Creating a Complex Entity • Iterating Through Vertices in a Polyline • Deleting Complex Entities • Container Objects • Basic Interaction with AutoCAD <ul style="list-style-type: none"> • Selection Set, Entity, and Symbol Table Functions • Global Functions for Interacting with AutoCAD • ObjectARX Global Utility Functions • AutoCAD Command Prompt Standard 	
• Practical	8
<ul style="list-style-type: none"> • Custom Objects – Introduction <ul style="list-style-type: none"> • Creating simple custom object • Link ARX and .NET applications • How to use ARX app with other applications 	4
• Practical	4
<ul style="list-style-type: none"> • SDS introduction - progeCAD • IRX introduction - progeCAD • DRX introduction - BricsCAD 	2
• Practical	2
• Project	20