

AutoLISP\_DCL\_Course.

Total Duration : 60hrs

| <b>AutoLISP_DCL_Course Curriculum</b>   | <b>Hrs.</b> |
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| <ul style="list-style-type: none"> <li>▪ Using the AutoLISP Language               <ul style="list-style-type: none"> <li>▪ AutoLISP Basics                   <ul style="list-style-type: none"> <li>• AutoLISP Expressions                       <ul style="list-style-type: none"> <li>• AutoLISP Function Syntax</li> </ul> </li> <li>• AutoLISP Data Types                       <ul style="list-style-type: none"> <li>• Integers</li> <li>• Reals</li> <li>• Strings</li> <li>• Lists</li> <li>• Selection Sets</li> <li>• Entity Names</li> <li>• File Descriptors</li> <li>• Symbols and Variables</li> </ul> </li> <li>• AutoLISP Program Files                       <ul style="list-style-type: none"> <li>• Formatting AutoLISP Code</li> <li>• Comments in AutoLISP Program Files</li> </ul> </li> <li>• AutoLISP Variables                       <ul style="list-style-type: none"> <li>• Displaying the Value of a Variable</li> <li>• Nil Variables</li> <li>• Predefined Variables</li> </ul> </li> <li>• Number Handling</li> <li>• String Handling</li> <li>• Basic Output Functions                       <ul style="list-style-type: none"> <li>• Displaying Messages</li> <li>• Control Characters in Strings</li> <li>• Wild-Card Matching</li> </ul> </li> <li>• Equality and Conditional</li> <li>• List Handling                       <ul style="list-style-type: none"> <li>• Point Lists</li> <li>• Dotted Pairs</li> </ul> </li> <li>• Symbol and Function Handling                       <ul style="list-style-type: none"> <li>• Using defun to Define a Function</li> <li>• C:XXX Functions</li> <li>• Local Variables in Functions</li> <li>• Functions with Argum</li> </ul> </li> </ul> </li> </ul> </li> </ul> | 4           |
| <ul style="list-style-type: none"> <li>▪ Practical</li> </ul>   | 4           |
| <ul style="list-style-type: none"> <li>▪ Using AutoLISP to Communicate with AutoCAD               <ul style="list-style-type: none"> <li>• Accessing Commands and Services                   <ul style="list-style-type: none"> <li>• Command Submission</li> </ul> </li> </ul> </li> </ul>   | 4           |

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| <ul style="list-style-type: none"> <li>• System and Environment Variables</li> <li>• Configuration Control</li> <li>• Display Control       <ul style="list-style-type: none"> <li>• Control of Graphics and Text Windows</li> <li>• Control of Low-Level Graphics</li> </ul> </li> <li>• Getting User Input       <ul style="list-style-type: none"> <li>• The getxxx Functions</li> <li>• Control of User-Input Function Conditions</li> </ul> </li> <li>• Geometric Utilities       <ul style="list-style-type: none"> <li>• Object Snap</li> <li>• Text Extents</li> </ul> </li> <li>• Conversions       <ul style="list-style-type: none"> <li>• String Conversions</li> <li>• Angular Conversion</li> <li>• ASCII Code Conversion</li> <li>• Unit Conversion</li> <li>• Coordinate System Transformations</li> </ul> </li> <li>• File Handling       <ul style="list-style-type: none"> <li>• File Search</li> </ul> </li> <li>• Device Access and Control       <ul style="list-style-type: none"> <li>• Accessing User Input</li> </ul> </li> </ul> |   |
| <ul style="list-style-type: none"> <li>▪ Practical</li> </ul>   | 4 |
| <ul style="list-style-type: none"> <li>▪ Using AutoLISP to Manipulate AutoCAD Objects       <ul style="list-style-type: none"> <li>• Selection Set Handling           <ul style="list-style-type: none"> <li>• Selection Set Filter Lists</li> <li>• Passing Selection Sets between AutoLISP and ObjectARX Applications</li> </ul> </li> <li>• Object Handling           <ul style="list-style-type: none"> <li>• Entity Name Functions</li> <li>• Entity Data Functions</li> <li>• Entity Data Functions and the Graphics Screen</li> <li>• Old-Style Polylines and Lightweight Polylines</li> <li>• Non-Graphic Object Handling</li> </ul> </li> <li>• Extended Data – xdata           <ul style="list-style-type: none"> <li>• Organization of Extended Data</li> <li>• Registration of an Application</li> <li>• Retrieval of Extended Data</li> <li>• Attachment of Extended Data to an Entity</li> <li>• Management of Extended Data Memory Use</li> <li>• Handles in Extended Data</li> </ul> </li> </ul> </li> </ul>                                | 4 |

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| <ul style="list-style-type: none"> <li>• Xrecord Objects</li> <li>• Symbol Table and Dictionary Access           <ul style="list-style-type: none"> <li>• Symbol Tables</li> <li>• Dictionary Entries</li> </ul> </li> </ul>  |   |
| <ul style="list-style-type: none"> <li>▪ Practical</li> </ul>   | 4 |
| <ul style="list-style-type: none"> <li>▪ Working with Programmable Dialog Boxes           <ul style="list-style-type: none"> <li>• Designing Dialog Boxes               <ul style="list-style-type: none"> <li>• Dialog Box Components</li> <li>• Using DCL to Define Dialog Boxes</li> <li>• Displaying Dialog Boxes with Visual LISP</li> <li>• Adjusting the Layout of Dialog Boxes</li> <li>• Design Guidelines</li> </ul> </li> <li>• Managing Dialog Boxes               <ul style="list-style-type: none"> <li>• Controlling Dialog Boxes with AutoLISP Programs</li> <li>• Action Expressions and Callbacks</li> <li>• Handling Tiles</li> <li>• Nesting Dialog Boxes</li> <li>• Functions for Hiding Dialog Boxes</li> <li>• List Boxes and Pop-Up Lists</li> <li>• Image Tiles and Buttons</li> <li>• Application-Specific Data</li> <li>• DCL Error Handling</li> <li>• Dialog Box Function Summary</li> </ul> </li> </ul> </li> </ul> | 4 |
| <ul style="list-style-type: none"> <li>▪ Practical</li> </ul>   | 4 |
| <ul style="list-style-type: none"> <li>• Programmable Dialog Box Reference           <ul style="list-style-type: none"> <li>• Tile Attributes</li> <li>• Synopsis of Predefined Attributes</li> <li>• DCL Attribute Catalog</li> <li>• action</li> <li>• alignment</li> <li>• allow_accept</li> <li>• aspect_ratio</li> <li>• big_increment</li> </ul> </li> </ul>  | 4 |

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|   | <ul style="list-style-type: none"> <li>• children_alignment</li> <li>• children_fixed_height</li> <li>• children_fixed_width</li> <li>• color</li> <li>• edit_limit</li> <li>• edit_width</li> <li>• fixed_height</li> <li>• fixed_width</li> <li>• fixed_width_font</li> <li>• height</li> <li>• initial_focus</li> <li>• is_bold</li> <li>• is_cancel</li> <li>• is_default</li> <li>• is_enabled</li> <li>• is_tab_stop</li> <li>• key</li> <li>• label</li> <li>• layout</li> <li>• list</li> <li>• max_value</li> <li>• min_value</li> <li>• mnemonic</li> <li>• multiple_select</li> </ul> |   |
| <ul style="list-style-type: none"> <li>▪ Practical</li> </ul> |  | 4 |
|   | <ul style="list-style-type: none"> <li>• password_char</li> <li>• small_increment</li> <li>• tabs</li> <li>• tab_truncate</li> <li>• value</li> <li>• width</li> <li>• Functional Synopsis of DCL Tiles</li> <li>• DCL Tile Catalog</li> <li>• boxed_column</li> <li>• boxed_radio_column</li> <li>• boxed_radio_row</li> <li>• boxed_row</li> <li>• button</li> <li>• column</li> <li>• concatenation</li> <li>• dialog</li> </ul>  | 4 |

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| <ul style="list-style-type: none"> <li>• edit_box</li> <li>• errtile</li> <li>• image</li> <li>• image_button</li> <li>• list_box</li> <li>• ok_only</li> <li>• ok_cancel</li> <li>• ok_cancel_help</li> <li>• ok_cancel_help_errtile</li> <li>• ok_cancel_help_info</li> <li>• paragraph</li> <li>• popup_list</li> <li>• radio_button</li> <li>• radio_column</li> <li>• radio_row</li> <li>• row</li> <li>• slider</li> <li>• text</li> <li>• text_part</li> <li>• toggle</li> <li>• spacer</li> <li>• spacer_0</li> <li>• spacer_1</li> </ul> |   |
| <ul style="list-style-type: none"> <li>▪ Practical</li> </ul>   | 4 |
| <ul style="list-style-type: none"> <li>• Programmable Dialog Box Function Synopsis           <ul style="list-style-type: none"> <li>• Dialog Box Opening and Closing Functions</li> <li>• Tile- and Attribute-Handling Functions</li> <li>• List Box and Pop-Up List-Handling Functions</li> <li>• Image Tile-Handling Functions</li> <li>• Application-Specific Data-Handling Function</li> </ul> </li> </ul>  | 4 |
| <ul style="list-style-type: none"> <li>▪ Practical</li> </ul>   | 8 |