



# AUTO-CAD (ME)

**DURATION: 60 Hours**



## **MODULE 1: 2D DESIGN**

### **UNIT 1: INTRODUCING AUTOCAD 2010**

- 1.1 OPENING AUTOCAD 2010
- 1.2 PALETTES
- 1.3 TOOL PALLET
- 1.4 DIALOGS
- 1.5 BUTTONS AT THE LEFT-HAND END OF THE STATUS BAR
- 1.6 BUTTONS AT THE RIGHT-HAND END OF THE STATUS BAR
- 1.7 THE AUTOCAD COORDINATE SYSTEM
- 1.8 DRAWING TEMPLATES
- 1.9 ANOTHER AUTOCAD WORKSPACE
- 1.10 THE RIBBON
- 1.11 CUSTOMIZATION OF USER INTERFACE

### **UNIT 2: INTRODUCING DRAWING**

- 2.1 THE 2D DRAFTING & ANNOTATION WORKSPACE
- 2.2 DRAWING WITH THE LINE TOOL
- 2.3 DRAWING WITH THE CIRCLE TOOL
- 2.4 THE ERASE TOOL
- 2.5 UNDO AND REDO TOOLS
- 2.6 DRAWING WITH THE POLYLINE TOOL

### **UNIT 3: DRAW TOOLS, OBJECT SNAP AND DYNAMIC INPUT**

- 3.1 INTRODUCTION
- 3.2 THE ARC TOOL
- 3.3 THE ELLIPSE TOOL
- 3.4 SAVING DRAWING
- 3.5 SNAP
- 3.6 OBJECT SNAPS (OSNAPS)
- 3.7 DYNAMIC INPUT (DYN)
- 3.8 WHY USE DYNAMIC INPUT?
- 3.9 THE POLYGON TOOL
- 3.10 THE RECTANGLE TOOL
- 3.11 THE POLYLINE EDIT TOOL

### **UNIT 4: ZOOM, PAN AND TEMPLATES**

- 4.1 INTRODUCTION
- 4.2 THE PAN TOOL



- 4.3 DRAWING TEMPLATES
- 4.4 SETTING LAYERS
- 4.5 ANOTHER TEMPLATES

## UNIT 5: THE MODIFY TOOLS

- 5.1 INTRODUCTION
- 5.2 THE COPY TOOL
- 5.3 THE MIRROR TOOL
- 5.4 THE OFFSET TOOL
- 5.5 THE ARRAY TOOL
- 5.6 THE MOVE TOOL
- 5.7 THE ROTATE TOOL
- 5.8 THE SCALE TOOL
- 5.9 THE TRIM TOOL
- 5.10 THE STRETCH TOOL
- 5.11 THE BREAK TOOL
- 5.12 THE JOIN TOOL
- 5.13 THE EXTEND TOOL
- 5.14 THE FILLET AND CHAMFER TOOLS

## UNIT 6: DIMENSIONS AND TEXT

- 6.1 INTRODUCTION
- 6.2 THE DIMENSION TOOLS
- 6.3 ADDING DIMENSIONS USING THE TOOLS
- 6.4 ADDING DIMENSIONS FROM THE COMMAND LINE
- 6.5 THE ARC LENGTH TOOL
- 6.6 THE JOGGED TOOL
- 6.7 DIMENSION TOLERANCES
- 6.8 TEXT
- 6.9 SYMBOLS USED IN TEXT
- 6.10 CHECKING SPELLING
- 6.11 EXERCISES

## UNIT 7: ORTHOGRAPHIC AND ISOMETRIC

- 7.1 ORTHOGRAPHIC PROJECTION
- 7.2 FIRST ANGLE AND THIRD ANGLE
- 7.3 SECTIONAL VIEWS
- 7.4 ISOMETRIC DRAWING
- 7.5 EXAMPLES OF ISOMETRIC DRAWINGS
- 7.6 EXERCISES

## UNIT 8: HATCHING

- 8.1 INTRODUCTION
- 8.2 EXAMPLE-ADVANCED HATCHING
- 8.3 EXERCISES

## UNIT 9: BLOCKS AND INSERTS

- 9.1 INTRODUCTION
- 9.2 BLOCKS
- 9.3 INSERTING BLOCKS INTO DRAWING
- 9.4 THE EXPLODE TOOL



- 9.5 THE PURGE TOOL
- 9.6 USING THE DESIGN CENTER
- 9.7 EXERCISES

## **MODULE 2: 3D DESIGN**

### **UNIT 10: INTRODUCING 3D MODELING**

- 10.1 INTRODUCTION
- 10.2 THE 3D MODELING WORKSPACE
- 10.3 METHODS OF CALLING TOOLS FOR 3D MODELING
- 10.4 THE POLYSOLID TOOL
- 10.5 THE EXTRUDE TOOL
- 10.6 THE CHAMFER AND FILLET TOOLS
- 10.7 CONSTRUCTING 3D SURFACES USING THE EXTRUDE TOOL
- 10.8 THE SWEEP TOOL
- 10.9 THE LOFT TOOL
- 10.10 EXERCISES

### **UNIT 11: 3D MODELS IN VIEWPORTS**

- 11.1 SETTING UP VIEWPORT SYSTEMS
- 11.2 EXERCISES

### **UNIT 12: THE MODIFICATION OF 3D MODELS**

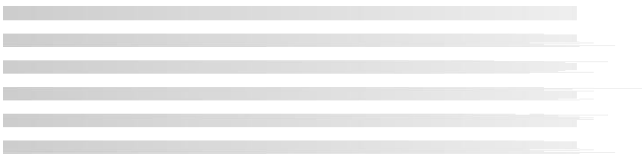
- 12.1 CREATING 3D MODEL LIBRARIES
- 12.2 CONSTRUCTING A 3D MODELS
- 12.3 THE 3D ARRAY TOOL
- 12.4 THE 3D MIRROR TOOL
- 12.5 THE 3D ROTATE TOOL
- 12.6 THE SLICE TOOL
- 12.7 THE SECTION TOOL
- 12.8 VIEWS OF 3D MODELS
- 12.9 THE HELIX TOOL
- 12.10 USING DYNAMIC INPUT
- 12.11 3D SURFACES
- 12.12 EXERCISES

### **UNIT 13: BUILDING DRAWINGS**

- 13.1 BUILDING DRAWINGS
- 13.2 FLOOR LAYOUTS
- 13.3 3D MODELS OF BUILDINGS
- 13.4 THE GARAGE
- 13.5 MATERIAL ATTACHMENTS AND RENDERING
- 13.6 EXERCISES

### **UNIT 14: THREE-DIMENSIONAL SPACE**

- 14.1 3D SPACE
- 14.2 THE USER COORDINATE SYSTEMS (UCS)
- 14.3 THE VARIABLE UCSFOLLOW
- 14.4 THE UCS ICON
- 14.5 EXAMPLES OF CHANGING PLANES USING THE UCS
- 14.6 SAVING UCS VIEWS



- 14.7 CONSTRUCTING 2D OBJECTS IN 3D SPACE
- 14.8 THE SURFACES TOOLS
- 14.9 EXERCISES

## UNIT 15: EDITING 3D SOLID MODELS

- 15.1 THE SOLID EDITING TOOLS
- 15.2 EXAMPLES OF MORE 3D MODELS
- 15.3 ANNOTATION SCALING
- 15.4 MULTILEADERS
- 15.5 EXERCISES

