

AutoCAD : Custom Course Topic Selection List

We recognise that many AutoCAD users require guidance on certain topics only. We have therefore devised a “Create Your Own Course” whereby you define your own agenda and duration.

Listed below are the topics covered in our four main courses, Level One – Stage 1 aimed at beginners, Level One Stage Two aimed at novice users, Level Two for advanced users and our 3D course. Beside each element is a points number and a topic reference number. You may select up to 70 points for each day (or 35 points per ½ day) up to a maximum of 3 days.

We would recommend that if you select most of the topics in a section, then you should do the entire section. We have also placed a code and points value for each section for ease of use. E.g. A 2-1 would be Module 2, Section 1, Drawing Precision in AutoCAD, worth 20 points.

Confident AutoCAD users may select topics from any module or chapter listed below to make up your custom course. Novice AutoCAD users may wish to restrict themselves to selections from just our Level One –Stage One and/or Stage 2 topics. Please note there maybe some “cross over” of topics between the three levels.

NOTE: We do NOT recommend beginners to create their own course, our 3 day Level One –Stage One course is the minimum requirement for beginners.

Once you have made your selection enter them on our custom course form which can be located on our web site. We will then assess your selection and may advise that you will have to omit some selections and/or add selections that are essential accompaniments to some of the topics you have selected.

You may wish to print this list for ease of selection.

LEVEL ONE – STAGE ONE (Beginners 3 Day Course)

Module One: Creating a Simple Drawing

	<u>Points</u>	<u>Topic Ref No</u>
Section 1: Getting Started with AutoCAD	16	A 1-1
Starting AutoCAD	1	(A-001)
AutoCAD’s Screen Layout	2	(A-002)
Command Line & Using the Keyboard	3	(A-002)
Using Your Pointing Device	4	(A-003)
Opening Files	4	(A-004)
AutoCAD’s Cartesian Workspace	2	(A-005)
Section 2 Basic Drawing & Editing Commands	33	A 1-2
Drawing Simple Lines	2	(A-007)
Erasing Objects	2	(A-008)
Accuracy, Direct Distance & Polar Tracking	7	(A-009)
Drawing Rectangles	3	(A-010)
Drawing Circles	4	(A-011)
Drawing with Grid & Snap	3	(A-012)
Viewing Your Drawing	5	(A-013)
Undoing & Redoing in AutoCAD	2	(A-014)
Saving Your Work including AutoSave Settings	4	(A-015)
Exiting AutoCAD	1	(A-016)

Module Two: Making Your Drawings More Precise

	<u>Points</u>	<u>Topic Ref No</u>
Section 1: Drawing Precision in AutoCAD	20 (Full) 14 LT	A 2-1
Using Object Snap	10 (Full) 8 (LT)	(A-017)
Object Snap Overrides	2	(A-018)
Polar Tracking Settings	4	(A-019)
Object Snap Tracking (not LT)	4	(A-020)
Making Changes in Your Drawings	15	A 2-2
Selecting Objects for Editing	3	(A-021)
Moving Objects	3	(A-022)
Copying Objects	3	(A-023)
Rotating Objects	3	(A-024)
Scaling Objects	3	(A-025)

A-021 must be with any option from A-022 to A-025

Module Three: Drawing Organisation and Information

Section 1: Organising Your Drawing With Layers	12	A 3-1
Creating New Drawings (Explaining Templates)	3	(A-026)(B-015)
What are Layers	1	(A-027)
Creating Layers & Layer State	6	(A-028)(B-017)
Changing an Object's Layer	2	(A-029)

A-027 to A-029 must be taken together

Two More Object Types	13	A 3-2
Drawing Arcs	5	(A-030)
Polylines	5	(A-031)
Converting Polylines To Lines & Arcs	1	(A-032)
Converting Lines & Arcs To Polylines	2	(A-033)

A-031 must be taken with either A-032 or A-033

Getting Information From Your Drawing	11	A 3-3
Measuring a Distance	2	(A-034)
Measuring an Area	3	(A-035)
Information about Objects	2	(A-036)
The Properties Box	4	(A-037)

Module Four: Creating More Complex Objects

	Points	Topic Ref No
Section 1: Advanced Editing Commands	19 (+ 3)	A 4-1
Trim	4	(A-038)
Extend	3	(A-039)
Stretch	3	(A-040)
Fillet	4	(A-041)
Chamfer	5	(A-042)

A-021 must be with any option from A-038 to A-042, A038+39 should be taken together

Duplication Commands	11 (+ 3)	A 4-2
Offsetting Objects	3	(A-043)
Mirroring Objects	3	(A-044)
Creating Rectangular & Polar Arrays of Objects	5	(A-045)

A-021 must be with any option from A-043 to A-045

Blocks (Should be done as a complete section)	11 (+3)	A 4-3
Inserting Blocks from Tool Palettes (2004 onwards only)	4	(A-046)
Inserting Blocks from The Design Centre	4	(A-047)(B-012)
Inserting Blocks with INSERT	3	(A-048)
Recommended Optional Extra:- Creating a simple Block	3	(B-008)

Module Five: Preparing to Print (Also a Separate 1 day or ½ day Course)

Section 1: Setting Up a Layout (Should be done as a complete section)	15	A 5-1
Printing Concepts	1	(A-049)
Working In Layouts	3	(A-050)
Understanding & Creating Viewports	5	(A-051)
Creating a New Layout	5	(A-052)
Guidelines for Layouts	1	(A-053)
Printing Your Drawing (Plotting)	14	A 5-2
PLOT Command dialogue Box	1	(A-054)
Plot Settings	5	(A-055)
Plot Preview	1	(A-056)
Plot Style Tables	2	(A-057) (C-060)
DWF Files & the DWF Viewer	3	(A-058)

Module Six: Annotating Your Drawing

	<u>Points</u>	<u>Topic Ref No</u>
Section 1: Text	10	A 6-1
Multiline Text (Adding, Formatting, Editing)	5	(A-059)
Single Line Text (Adding, Formatting, Editing)	3	(A-060)(B-031)
Text Styles, Using, Creating	2	(A-061)(B-018)
Hatching	7	A 6-2
Hatching	4	(A-062)
Hatching From Tool Palettes (2004 Onwards Only)	1	(A-063)
Editing the Hatch	2	(A-064)
Dimensions	21 (+7)	A 6-3
Dimensioning Concepts	1	(A-065)
Dimensions Commands	7	(A-066)
Leaders	2	(A-067)
Editing Dimensions	3	(A-068)
Selecting a Dimension Style	2	(A-069)
Dimensioning In Model / Paper Space	6	(A-070)
Recommended Optional Extra:- Creating Dimension Styles	7	(B-019)

LEVEL ONE – STAGE TWO (2 Day Novice/Intermediate)

Module 1 – Productivity Tools

	<u>Points</u>	<u>Topic Ref No</u>
Section 1: Selection Sets	12	B 1-1
Advanced Object Selection	3	(B-001)
Quick Select	3	(B-002)
Editing With Grips	6	(B-003)
Section 2: Accurate Positioning	11	B 1-2
Coordinate Entry	4	(B-003)
Review of UCS	2	(B-004)
Locating Points With Tracking (Not LT)	3	(B-005)
Construction Lines	2	(B-006)
Placing Reference Points	2	(B-007)

Module 2 – Creating & Organising Blocks

Section 1: Creating Blocks	13	B 2-1
Creating a Block	3	(B-008)
Creating Global Blocks	4	(B-009) (C-029)
Editing Blocks (Not LT)	4	(B-010) (C-031)
Removing Unused Elements	2	(B-011)
Section 2: Organizing Blocks	10 (2004) 12 (2005-6)	B 2-2
Using Design Center	4	(B-012)(A-047)
Customizing Tool Palettes (2004 Onwards Only)	3 (2004) 5 (2005-6)	(B-013)
Modifying Tool Properties in Tool Palettes	3	(B-014)

Module 3 – Drawing Set Up and Utilities

Section 1: Creating Templates	24	B 3-1
Why Use Templates	3	(B-015)(A-026)
Controlling Units Display	2	(B-016)
Creating New Layers	6	(B-017) (A-028)
Creating Text Styles	2	(B-018) (A-061)
Creating Dimension Styles	7	(B-019)
Adding Standard Layouts to Templates	3	(B-020)
Saving Templates	1	(B-021)
Section 2: Advanced Viewing Tools	8	B 3-2
Additional Zoom Options	2	(B-022)
Creating & Using Drawing Views	3	(B-023) (C-010)
Creating Multiple Viewports	3	(B-024) (C-011)

	<u>Points</u>	<u>Topic Ref No</u>
<u>Module 4 – Additional Commands</u>	23	B 4
Lengthen	2	(B-025)
Join	2	(B-026)
Break	2	(B-027)
Polygons	3	(B-028)
Donuts	2	(B-029)
Ellipses	3	(B-030)
Single Line Text	3	(B-031)(A-060)
Divide	3	(B-032)
Other Text Tools	3	(B-033)

LEVEL TWO (3 Day Course Confident Users)

Some elements may be unavailable in AutoCAD LT

Module 1 – Productivity Tools

	<u>Points</u>	<u>Topic Ref No</u>
Section 1: Working Efficiently In AutoCAD	11	C 1-1
Using the Right Click Shortcut Menus	3	(C-001)
Using the Keyboard Effectively	2	(C-002)
Controlling the drafting settings (review)	2	(C-003)
Creating tool Palettes	4	(C-004)
Section 2: Quick Editing Techniques	17	C 1-2
Working with properties	4	(C-005)
Double Click Editing	3	(C-006)
Using grips effectively	4	(C-007)
Object Selection Tips / Quick Select	3	(C-008)
Working in multiple drawings	3	(C-009)
Section 3: Viewing What You Need	9	C 1-3
Creating & Using Drawing Views	3	(C-010) (B-023)
Creating Multiple Viewports	3	(C-011) (B-024)
Partial Open & Partial Load (Not LT)	3	(C-012)

Module 2 – Advanced Object Types

Section 1: Polylines & Regions	18	C 2-1
Using complex polylines	4	(C-013)
Polylines with other commands	3	(C-014)
Editing polylines	4	(C-015)
Creating complex boundaries	3	(C-016)
Working with Regions	4	(C-017)
Section 2: Advanced Text Objects	17	C 2-2
Using Fields (2005 Onwards) (Not LT)	5	(C-018)
Creating Tables (2005 Onwards)	5	(C-019)
Table Modifications & Style (2005 Onwards)	5	(C-020)
Controlling the Draw Order	2	(C-021)
Section 3: Multi-Lines	14	C 2-3
Drawing With Multi-Lines	5	(C-022)
Multiline Styles	4	(C-023)
Editing Multiline Styles	5	(C-024)

Module 3 – Advanced Blocks & Attributes (Entire Section as a 1 day course)

	<u>Points</u>	<u>Topic Ref No</u>
Section 1: Dynamic Blocks (2006 Onwards Only)	40	C 3-1
We would recommend our ½ course for this with some extras from C3-2 & C3-3		
Working with Dynamic Blocks	10	(C-025)
Creating Dynamic Blocks (Not LT)	15	(C-026)
Dynamic Block Authoring Tools (Not LT)	15	(C-027)
Section 2: Advanced Blocks	14	C 3-2
Multiple Block Insertions	2	(C-028)
Local & Global Blocks	4	(C-029) (B-009)
Special Block Properties	4	(C-030)
Revising Blocks (Not LT)	4	(C-031) (B-010)
Section 3: Attributes	23	C 3-3
What are Attributes	1	(C-032)
Inserting Blocks with Attributes	2	(C-033)
Editing Attribute Values (Not LT)	3	(C-034)
Defining Attributes	5	(C-035)
Re-defining Blocks with Attributes (Not LT)	5	(C-036)
Extracting Attributes (Not LT)	4	(C-037)
Attribute Strategies	3	(C-038)
<u>Module 4 – Referencing & Sharing Information</u>		
Section 1: External References	20	C 4-1
Working with External References	5	(C-039)
Attachments vs Overlays	3	(C-040)
Xref Layers	2	(C-041)
Opening & Editing Xrefs	4	(C-042)
Binding Xrefs	3	(C-043)
Clipping and Xref	3	(C-044)
Section 2: Working With Images	10	C 4-2
Attaching Raster Images (Jpg, bmp, tiff etc) (Not LT)	3	(C-045)
Editing Images (Limited LT)	3	(C-046)
Controlling Image Display (Limited LT)	4	(C-047)
Section 3: Other Tools for Collaboration	17	C 4-3
e-Transmit	4	(C-048)
Hyperlinks	3	(C-049)
DWF files	3	(C-050+58) (A-058)
Object Linking & Embedding	7	(C-051)

Module 5 – Layouts & Plotting

	<u>Points</u>	<u>Topic Ref No</u>
Section 1: Working with Layouts	17	C 5-1
Layout Concepts (A review)	5	(C-052) (D-059) A5-1
Copying Layouts	2	(C-053)
Controlling Viewport Display	2	(C-054)
Creating custom/additional Viewports (Not LT)	3	(C-055)
Annotating Layouts	5	(C-056)
Section 2: Advanced Plotting Features	13	C 5-2
Managing Plotters	3	(C-057)
DWF /PDF Plotting & Viewing	3	(C-058+50) (A-058)
Publishing Drawing Sets	5	(C-059)
Plot Styles	2	(C-060) (A-057)

Module 6 – Sheet Sets (Only available as a 1 day course)

AutoCAD 2005 Onwards only, **not available to LT Users**

Section 1: Introduction To Sheet Sets

C 6-1

Overview of Sheet Sets	tba	(C-061)
Creating Sheet Sets	tba	(C-062)
Creating Sheets in Sheet Sets	tba	(C-063)
Adding Views to Sheets	tba	(C-064)
Importing Layouts to Sheet Sets	tba	(C-065)

Section 2: Publishing & Customising Sheet Sets

C 6-2

Transmitting and Archiving Sheet Sets	tba	(C-066)
Publishing Sheet Sets	tba	(C-067)
Customising Sheet Sets	tba	(C-068)
Custom Blocks For Sheet Sets	tba	(C-069)

Module 7 – Drawing Standards and System Set Up

Section 1: Maintaining Standards NOT LT

9

C 7-1

Drawing Standards	1	(C-070)
Managing Layers	2	(C-071)
Managing Dimension Styles	3	(C-072)
Design Centre	3	(C-073)

Section 2: CAD Standards NOT LT

11

C 7-2

CAD Standards Concepts	2	(C-074)
Configuring Standards	3	(C-075)
Checking Standards	3	(C-076)
Layer Translator	3	(C-077)

	<u>Points</u>	<u>Topic Ref No</u>
Section 3: System Set Up	23	C 7-3
The Options Dialogue	10	(C-078)
System Variables	5	(C-079)
Dynamic Input Settings (2006 Onwards)	3	(C-080)
Drawing Utilities	5	(C-081)
 <u>Module 8 – Introduction To Customisation</u>		
Section 1: Customising the User Interface	19	C 8-1
Why Customise?	2	(C-082)
What can be customised	2	(C-083)
Setting up Workspaces (2006 Only)/Profiles	4	(C-084)
Creating Custom Toolbars	5	(C-085)
Custom Menus	3	(C-086)
Keyboard Shortcuts	3	(C-087)
Section 2: Macros & Custom Routines	9	C 8-2
Custom Commands & Macros	5	(C-088)
Running Scripts(Examples only) (Not LT)	2	(C-089)
Loading Custom Routines (Examples only) (Not LT)	2	(C-090)
 <u>Module 9 – Introduction To 3D</u>		
Not Available to AutoCAD LT Users		
Section 1: Working in 3D	16	C 9-1
3D Concepts	2	(C-091) (D-001)
Types of 3D Objects	3	(C-092) (D-002)
Viewing In 3D	5	(C-093) (D-006)
AutoCAD's 3D Coordinate System	3	(C-094) (D-011)
Introduction To the User Coordinate System	3	(C-095) (D-014)
Section 2: Solid Modelling	18	C 9-2
Solid Concepts	2	(C-096) (D-027)
Solid Primitives	8	(C-097) (D-028-30)
Creating Complex Solids	8	(C-098) (D-031-34)
Section 3: Visualisation Techniques	16	C 9-3
Rendering Concepts	3	(C-099)
Adding Materials to your Model	4	(C-100) (D-073 part)
Scenes & Lighting	5	(C-101) (D-074 part)
Adding Bitmaps	4	(C-102) (D-075 part)

3D DRAWING & MODELLING (CONFIDENT AUTOCAD USERS ONLY)

Not Available to AutoCAD LT Users

Module 1: Basic 3D Concepts

	<u>Points</u>	<u>Topic Ref No</u>
Section 1: Foundations	28	D 1-1
Why Use 3D?	2	(D-001) (C-091)
Types of 3D Models	3	(D-002) (C-092)
Wireframe Modeling	2	(D-003)
Surface Modeling	2	(D-004)
Solid Modeling	2	(D-005)
Basic Viewing in 3D	5	(D-006) (C-093)
Rotating the View	3	(D-007)
Adding Thickness to 2D Objects	3	(D-008)
Setting the Elevation	2	(D-009)
Using Multiple Viewports in model space	4	(D-010)
Section 2: Working With 3D Co-ordinates	24	D 1-2
AutoCAD's 3D Coordinate System	3	(D-011) (C-094)
Using Object Snaps in 3D	4	(D-012)
Point Filters	4	(D-013)
Introduction to the User Coordinate System	3	(D-014) (C-095)
Moving the UCS Origin	2	(D-015)
The UCS View Option	2	(D-016)
The UCS 3 Point Option	2	(D-017)
Working with Multiple UCSs	4	(D-018)

Module 2: Creating Surfaces

Section 1: Simple Surface Objects	18	D 2-1
Creating Flat 3D Surfaces	3	(D-019)
3D Surface Primitives	15	(D-020)
Section 2: Complex Surfaces	24	D 2-2
Creating More Complex Surfaces	3	(D-021)
Extruded (Tabulated) Surface	3	(D-022)
Revolved Surface	3	(D-023)
Creating Surfaces from Edges	5	(D-024)
Creating Ruled Surfaces	5	(D-025)
Editing 3D Surfaces	5	(D-026)

Module 3: Solid Modeling

	<u>Points</u>	<u>Topic Ref No</u>
Section 1: Simple Solids	10	D 3-1
Solid Modeling	2	(D-027) (C-096)
Creating Boxes and Wedges	3	(D-028) (C-097)
Creating Cylinders and Cones	3	(D-029) (C-097)
Creating Spheres and Tori	2	(D-030) (C-097)
Section 2: Creating Composite Solids	10	D 3-2
Boolean Operations	2	(D-031) (C-098)
Joining Solids	2	(D-032) (C-098)
Subtracting Solids	2	(D-033) (C-098)
Finding the Common Volume	2	(D-034) (C-098)
Interference Checking	2	(D-035)
Section 3: Creating Solids from 2D Objects	12	D 3-3
Swept Solids	3	(D-036)
Extruded Solids	3	(D-037)
Revolved Solids	3	(D-038)
The UCS Face Option	3	(D-039)

Module 4: Editing Solids

Section 1: Adding Features to Solids	14	D 4-1
Creating 3D Fillets	4	(D-040)
Creating 3D Chamfers	4	(D-041)
Slicing a Solid along a Plane	3	(D-042)
Cross-Sectional Views	3	(D-043)
Section 2: Advanced Solids Editing	29	D 4-2
Using the SOLIDEDIT Command	2	(D-043)
Extruding and Offsetting Faces	4	(D-044)
Moving and Rotating Faces	5	(D-045)
Tapering a Face	4	(D-046)
Creating a Shell	4	(D-047)
Removing Faces	3	(D-048)
Imprinting and Cleaning	3	(D-049)
Additional Options	4	(D-050)

Module 5: Manipulating 3D Objects

	<u>Points</u>	<u>Topic Ref No</u>
Section 1:Advanced UCS Options	13	D 5-1
The UCS X, Y, and Z Options	2	(D-050)
Saving a UCS by Name	3	(D-051)
OrthoGraphic UCSs	4	(D-052)
Named Views in 3D	4	(D-053)
Section 2: Editing in 3D	21	D 5-2
Aligning Objects in 3D	5	(D-054)
Mirroring Objects in 3D	4	(D-055)
Rotating Objects in 3D	4	(D-056)
Arraying Objects in 3D	4	(D-057)
Getting Information about 3D Objects	4	(D-058)

Module 6: Working Drawings and 3D Objects

Section 1:Working with Layouts	23	D 6-1
Layouts: A Review	5	(D-059) (C-052)
Creating and Scaling 3D Viewports	5	(D-060)
Controlling Viewport Display	4	(D-061)
Special Floating Viewports Setup	5	(D-062)
Drawings from 3D Models	4	(D-063)
Section 2: 2D Drawings From 3D Models	25	D 6-2
2D Views from 3D Solids	6	(D-064)
Creating Hidden Line Views	6	(D-065)
Creating Profiles from Solids	5	(D-066)
Inserting Rendered Images	3	(D-067)
Dimensioning in Layouts	5	(D-068)

Module 7: Presenting the 3D Model

See Also our 1 day visualisation course

Section 1: Refining the View	10	D 7-3
Perspective Views	2	(D-069)
Working with Camera and Target	4	(D-070)
Clip Planes	4	(D-071)
Section 2: Rendering	25	D7-1

Rendering Concepts	2	(D-072) (C-099)
Attaching Materials to the Model	8	(D-073) (C-100 overview)
Scenes and Lighting	10	(D-074) (C-101 overview)
Adding Extras	5	(D-075) (C-102 overview)