# Simon Oliver AutoCAD Training, CAD Standards & Customisation





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# **Background Information**

# **Education**

On leaving school, I undertook a two-year Building & Civil Engineering Studies course at my local technical college.

# **Employment**

I worked in a shop fitting drawing office for a short while where I created shopfront drawings using traditional drafting techniques on a drawing board.

I became involved with AutoCAD in 1987 via a local architectural practice. The practice bought AutoCAD when it first arrived in this country in 1983 and started to offer drafting, support and training services to other people thinking of buying it for themselves.

They set up a separate company to become AutoCAD main dealers selling the full range of software and hardware products associated with AutoCAD.

I joined the newly formed company and spent the first twelve months as a CAD Technician producing drawings and creating symbols libraries for local companies.

In total, I spent over four years with them progressing through the company carrying out training, technical support and sales of AutoCAD systems to companies nationwide and then worked a further year with another AutoCAD main dealer.

## Freelance

In August 1992, I set up in a freelance capacity and I have operated as such ever since.

Although independent, I do work to the guidelines laid down by Autodesk for providing training services and I attend update courses in order to keep abreast of the latest developments with the software.

I take annual exams to keep my Autodesk Accreditation and this has resulted in the achievement of Autodesk Certified Instructor status.

I also have two City and Guilds qualifications in training proving my proficiency in evaluating the needs of AutoCAD users and in turn addressing those needs through delivering the necessary help, advice and training.

# **Training Services**

AutoCAD is a versatile piece of software capable of producing a wide range of technical drawings. It also forms the core program for numerous add-on packages for architectural, mechanical, electrical and many other drafting disciplines.

In order to do the program any justice at all and to fully benefit from all of the features, it would be necessary to embark on an on-going training programme over a period of time and I can offer a training programme that is both structured and tailored for new users and experienced users alike.

## Tailored training

Each course I run is tailored to the individual needs of the delegates taking part so that the content matches their drafting discipline, experience and objectives.

As well as using my own exercise drawings in order to teach you the best way of doing things, I will be happy to use some existing examples produced by your company thereby making the training totally relevant to the type of drawings you want to produce.

Any training could be staged in various ways including: -

- Formal, structured (classroom style) training sessions.
- Less formal training "workshops" where user based questions can be addressed.
- Floor walking where users can be visited at their desks and offered help on specific queries.

## On-site training

All courses are run as on-site training courses using the facilities available within your company; ideally in a quiet room away from the main office environment. This is a very economical method, as I would just charge for my time to run the course.

## Course material

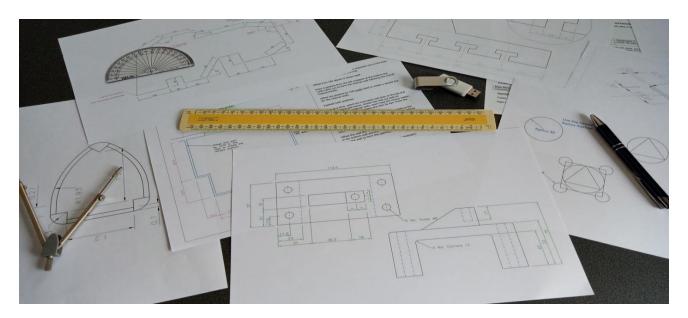
Each person attending one of my courses will receive: -

- A set of notes detailing the topics we have covered.
- Practical exercise drawings to work through relevant to your application.
- A certificate.

## Post course support

Once you have attended one of my courses, I will be available to answer any queries you may have in implementing the training. I hope to build an ongoing relationship with you for all your AutoCAD needs.

## Course Schedule



Rather than force you to fit in with my schedule, I would create a course programme that is unique to you and the way that you use AutoCAD for your drafting application.

I can provide a free training needs appraisal document from which I can evaluate your requirements and provide recommendations as to an appropriate course programme.

I create practical exercise material based upon your own existing drawings so that the training is as relevant as possible to the work you do.

The following list is a guide to the type of courses I offer.

- AutoCAD and AutoCAD LT 2D Introduction
- AutoCAD and AutoCAD LT 2D Intermediate
- AutoCAD and AutoCAD LT 2D Advanced
- AutoCAD and AutoCAD LT New Features
- AutoCAD 3D

# **PLEASE NOTE:**

All of the training courses and consultancy services that I provide are tailored to your exact drafting application and I aim to be as flexible as possible in order to make the training totally relevant to you and the way that you work.

The very nature of covering tailored topics, means that I am more than happy to mix and match topics from all of the services I provide to be able to create the bespoke and personal experience for you.

## Level 1: AutoCAD & AutoCAD LT Introduction

Target Audience: This course is aimed at new users of either the full blown package or the cut down

equivalent - AutoCAD LT.

Pre-Requisites: Delegates must be familiar with using a Windows based PC, a keyboard and mouse

to a reasonable standard. An understanding of technical drawing concepts and maths would also be beneficial (*I can provide some pre-course help if required*).

Duration: 3 days would be required to cover these topics through practical hands-on guidance

on how to use the software.

Format: Example drawing exercises would be used to cover a wide range of drafting

applications. I would also be happy to incorporate any specific sample drawings you

may care to provide to make the training as relevant as possible.

Location: All training is carried out on-site in your office using your own computers. As well as

learning how to use the software, you will be shown how to set up defaults and

system variables that will help you going forward.

## Getting started and creating useful default settings

Explanation of the ribbon, command window, palettes and other user interface features.

An overview of model space versus paper space.

• Ensuring drawings are started correctly with metric settings and other file management tips.

#### Creating and editing drawings

- Creating lines, arcs and circles and other everyday shapes.
- Using polylines to good effect.
- Using object snaps and tracking to draw and edit objects accurately.
- Using ortho and other drawings aids.
- Using the different methods to select objects in the drawing.
- Performing basic editing tasks like moving, copying, mirroring and rotating objects.
- Trimming, extending, filleting and chamfering objects.
- Offsetting various types of geometry.
- Using Grips.

# Drawing Organisation

- Using layers, colours and linetypes and understanding the bylayer concept.
- Matching object properties.
- Using the properties palette.
- Setting linetype scales in both model space and paper space.

# Hatching

Creating and editing areas of hatching.

# **Inquiry Commands**

- Listing drawing information.
- Measuring distances and angles.

#### Text

- Creating and editing multiline and single line text.
- The importance of creating and editing text styles.

# Dimensioning

- Creating and editing dimensions.
- The importance of creating and editing dimension styles.

#### Multi-leaders

- Creating and editing multi-leaders.
- The importance of creating and editing multi-leader styles.

# Re-using items

- An introduction to working with blocks.
- Using the Design Centre.
- Using Tool Palettes.

# Layouts and Plotting

- Setting up layouts using page setups.
- Creating and editing viewports.
- Scaling drawings.
- Plotting drawings.

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Therefore the topics are easily interchangeable to allow you to have a bespoke course outline.

## Level 2: AutoCAD & AutoCAD LT Intermediate

Target Audience: This course is aimed at existing users of either the full blown package or the cut

down equivalent - AutoCAD LT.

Pre-Requisites: Delegates must be familiar with the topics in the level 1 (introduction) course.

Duration: 3 days would be required to cover these topics through practical hands-on guidance

on how to use the software.

Format: Example drawing exercises would be used to cover a wide range of drafting

applications. I would also be happy to incorporate any specific sample drawings you

may care to provide to make the training as relevant as possible.

Location: All training is carried out on-site in your office using your own computers. As well as

learning how to use the software, you will be shown how to add to and enhance the

defaults and system variables from the introduction course.

# Drawing template files

Understanding the difference between a dwg and a dwt file.

Assessing the five main features of a dwt file.

• Creating a dwt file(s) and understanding the importance of doing so.

## Little known drawing and editing features

- Quick select.
- Irregular shaped selection windows.
- Points and point styles.
- Dividing and measuring objects.

## Drawing Organisation

- Using the additional layer tools to manage your layers.
- Setting layer properties per viewport.

#### **Blocks**

- Creating and inserting blocks.
- Understanding the importance of layer 0.
- Working with nested blocks.
- Using the block editor.

# Dynamic blocks

- Creating dynamic block parameters and actions.
- Using visibility states.
- Using look-up tables.

# Tool palettes

- Storing blocks and hatch patterns for future use.
- Storing default styles and properties for day to day geometry.
- Storing default styles and properties for annotation.
- Sharing tool palettes across your network.

# Hatching

- Creating gradient colour fills.
- Using regions and boundaries.

# Plot style tables

- Understanding the difference between a ctb and an stb file.
- Creating plot style tables.
- Using and maintaining plot style tables.

#### PLEASE REMEMBER:

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Therefore particularly with the intermediate and advanced outlines, the topics are easily interchangeable to allow you to have a bespoke course outline.

## Level 3: AutoCAD & AutoCAD LT Advanced

Target Audience: This course is aimed at existing users of either the full blown package or the cut

down equivalent - AutoCAD LT.

Pre-Requisites: Delegates must be familiar with the topics in the level 1 (introduction) and level 2

(intermediate) courses.

Duration: 2 days would be required to cover these topics through practical hands-on guidance

on how to use the software.

Format: Example drawing exercises would be used to cover a wide range of drafting

applications. I would also be happy to incorporate any specific sample drawings you

may care to provide to make the training as relevant as possible.

Location: All training is carried out on-site in your office using your own computers. As well as

learning how to use the software, you will be shown how to build upon and enhance

the defaults and system variables learnt previously.

## External reference files

Attaching, detaching, loading and un-loading other drawing files (xrefs).

- Binding xrefs and the implications of doing so.
- Attaching other files types (jpegs, tiffs, dwfs and dgn files etc.)
- Using the reference manager palette.

# 3rd party file preparation

- Using the publish command.
- Preparing your drawing for e-mail transmittal using AutoCAD's built in features.
- Attaching hyperlinks to your drawing.

## Drawing Organisation

- Creating, exporting and re-using layer states.
- Using the layer translator.

## Annotation

- Creating and using fields to automate text.
- Creating and editing attributes in blocks and title blocks.
- Creating tables of information.
- Annotative scaling. (Would be covered from day one really).

Continued...

## User co-ordinate systems

- Understanding co-ordinate systems.
- Creating user co-ordinate systems.
- Saving and managing co-ordinate systems.
- Creating and saving drawing views.

#### **Parametrics**

- Introduction to Parametrics
- Assigning geometric constraints
- Assigning dimensional constraints

#### Introduction to Sheet Sets

- Creating Sheet Sets
- Working with Sheet Sets
- Setting Sheet Set Properties
- Using Fields in Sheet Sets
- Using Attributes in Sheet Sets
- Publishing, Transmitting, and Archiving Sheet Sets

# Lisp routines (Full AutoCAD Only).

- Understanding lisp routines.
- Loading and using lisp routines to speed up day to day tasks.

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Therefore particularly with the intermediate and advanced outlines, the topics are easily interchangeable to allow you to have a bespoke course outline.

## AutoCAD & AutoCAD LT New Features

Target Audience: This course is aimed at existing users of either the full blown package or the cut

down equivalent - AutoCAD LT and covers new and enhanced features from recent

years.

Pre-Requisites: Delegates must be familiar with the topics up to the level 3 (advanced) course.

Duration: 2-3 days would be required to cover these topics through practical hands-on

guidance on how to use the software.

Format: Example drawing exercises would be used to cover a wide range of drafting

applications. I would also be happy to incorporate any specific sample drawings you

may care to provide to make the training as relevant as possible.

Location: All training is carried out on-site in your office using your own computers.

• PDF Import

Centre Lines and Centre Marks

Steering Wheel

Action Recorder

Annotation Scaling

• Layer dialogue palette

• Layer Properties per Viewport

Layer reconciliation

Layer manipulation tools

Hatch enhancements

Viewport rotate

New dimensioning commands

• Multiple Segment Leaders

• Multiple Line Attributes

• Table style changes

• Linking Tables with Microsoft Excel

MTEXT Columns and other enhancements

Parametric drawing

Geometric constraints

Layout tab manipulation and editing

• Customisable user interface changes

Editable double click actions

• PDF, DWF and DGN files as underlays

• External reference palette enhancements

• Purge enhancements

• Block usage enhancements.

• Free-Form Design

• 3D Printing

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Therefore the topics are easily interchangeable to allow you to have a bespoke course outline.

# AutoCAD 3D

Target Audience: This course covers the features of AutoCAD necessary for the creation of 3D models.

AutoCAD LT is not suitable for 3D.

Pre-Requisites: This course is aimed at existing users of the software who are already familiar with

AutoCAD for producing 2D drawings but want to enhance their design with 3D

models and colour rendered images.

Duration: 1-2 days would be required to cover these topics through practical hands-on

guidance on how to use the software.

Format: Example drawing exercises would be used to cover a wide range of drafting

applications. I would also be happy to incorporate any specific sample drawings you

may care to provide to make the training as relevant as possible.

Location: All training is carried out on-site in your office using your own computers.

Creating a 3D workspace(s).

- Creating Basic Solid Primitives.
- Viewing in 3D Isometric, Axonometric and Perspective.
- User Coordinate Systems (UCS).
- More complex Solids extrude, loft, revolve, sweep etc.
- Creating solids by thickening.
- 3D editing & manipulation.
- Using Viewports in 3D.
- Flattening 3D to 2D.
- Lighting and Materials.
- Using visual styles.
- Cameras.
- Display Modes (Visual Styles, Transparency, Edge Effects).
- Photo-Real Rendering.
- Animations.

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Therefore the topics are easily interchangeable to allow you to have a bespoke course outline.

## Other Services

As well as training you to use the various features of AutoCAD, I can also carry out the following tasks: -

#### **CAD Standards**

This service is also aimed at existing users of the software or Cad managers and could apply to the full blown package or the cut down equivalent – AutoCAD LT.

You will be shown how to set up, implement and maintain Cad standards in AutoCAD that are tailored to your drafting application and the type of drawing you produce.

A good working knowledge of using AutoCAD to perform a variety of tasks such as working with layers, text, dimensions & blocks would be required.

#### **Features**

Creating drawing sheets with built in attributes and dynamic blocks to help fill in the title block easily. Setting up plot style tables, layouts and printer settings.

Creating different layers, layer groups, colours and linetypes.

Creating different text styles and dimensions styles.

Setting up system variables and options to make AutoCAD work in a way that suits you.

Saving all of this in a dwt template file and making AutoCAD automatically load it when you start drawing.

## Customisation

This service is also aimed at existing users of the software or Cad managers and could apply to the full blown package or the cut down equivalent – AutoCAD LT.

Common commands that are often executed, repetitive tasks and regularly used features of the software can be turned into macros often resulting in a single click command.

If you have the full blown version of the software rather than AutoCAD LT, then it is possible to go a step further and write your own commands.

#### Accessibility

To make the macros or new commands easily accessible to all users, I would recommend utilising the tool palettes feature.

Tool palettes provide a way of display icons with built in predefined properties that will perform several tasks in one click.

They can also be exported and shared with other users which helps tie in with ensuring your in-house CAD standards are utilised effectively.

#### Free demo

I am happy to provide a free demonstration of what the potential of customisation using command macros and tool palettes entails for the way that you work.

# Client Portfolio

I have worked with many different types of companies all over the UK including: -

- Local Authorities.
- Public Companies.
- Private Companies.
- Partnerships.
- Sole Traders.

As well as working with drafting technicians, I work with other potential users such as salespeople who may need to produce a simple drawing to accompany a quotation and managers who may just need an overview of the software and its capabilities.

I also have experience of working in many different industry sectors including: -

- Archaeology.
- Architecture.
- Building Services.
- Building Surveying.
- Civil Engineering.
- Electrical Contractors.
- Electronics.
- Fabrication.
- Facilities Management.
- Highways Planning.
- Landscape Architecture.
- Land Surveying.
- Mechanical Engineering.
- Office Furniture Layout.
- Structural Engineering.
- Warehouse Layout and Design.
- Window Design.

If you would like to use any of these companies as a reference site, please do not hesitate to contact me and I will supply the relevant contact details.