Level 2 Award in 2D Computer Aided Design

This training course aims to equip candidates with the basic understanding and principles of 2D drawing environment, in terms of hardware, software and physical surroundings. It will explore the typical composition of a CAD system and health and safety matters that are associated with safe working practices.

For details of the training units for this course, please see overleaf.

The cost for the CAD Level 2 course is **£950.00** and consists of 5 full days training (7.5 hours per day), 1 day 'mock' exam and 1 day City & Guilds examination. If you exceed this timescale then you will expected to pay the daily rate of **£135.00** for any additional training. If you do not pass the City & Guilds examination, and wish to sit it again, then you will be expected to pay the daily rate plus **£50.00** towards the examination costs.

To register your interest, or find out more, call freephone 0808 2000 129 or email your contact details to enquiries@cadcentreuk.com

There are eight learning outcomes from this training course.

1. Use associated IT, CAD hardware and operating systems

The learner will be able to:
1. Select and use necessary hardware for a generic CAD station
2. Select appropriate printer/plotter paper
3. Recognise and report problems relating to components
4. Select different parts of the desktop to initiate software
5. Apply the following functions of the desktop window

2. Use basic file management techniques and maintain health and safety requirements

The learner will be able to:
1. Apply a range of basic file operations: new, open, save, save as, close.
2. Create new named directories/folders and move/copy files between directories.
3. Delete and rename files and directories/folders
4. Create back-up copies of files and directories/folders
5. Display lists of files contained within a specific folder or directory, including details of file extensions

3. Use and identify key components of the software relating to the 2D drawing environment

The learner will be able to:
1. Display tool bars from the CAD system and remove unwanted toolbars from the user area.
2. Move toolbars within the CAD environment to create usable work area
3. Modify toolbars to add or remove existing icons/buttons
4. Display, move and modify dialogue boxes from a CAD system
5. Change the background colour and graphics cursor (cross hairs) size for the drawing window
6. Change the command window size
7. Change user Coordinate System (UCS) icon from on to off

4. Use a range of viewing commands and set up the drawing space

The learner will be able to:
1. Select and open an existing drawing from storage media
2. Use a range of Zoom commands to look at specific parts of a drawing: real time, window, extents
3. Set up a number of views of a drawing that can be easily restored
4. Set up the drawing environment with the correct units in order to start producing a drawing
5. Ensure that the limits of the designated screen area are appropriate for drawing to be produced
6. Set up an appropriate grid and snap to aid drawing production
7. Create and use a template which will set the drawing environment ready for drawing production

5. Use drawing commands to produce shapes

The learner will be able to:
1. Demonstrate the use of a line command to produce various shapes in the drawing window, with and without the use of grid, snap, orthographic and polar modes
2. Produce entities that are connected to end points and defining points of existing drawing objects
3. Produce a series of lines (multiple vertices) that are recognised by the software as one single line entry and with uniform or varying widths
4. Draw a number of node points, using different point styles
5. Use a range of commands to produce the following shapes

6. Use the CAD software's co-ordinate system to aid accurate drawing

The learner will be able to:
1. Demonstrate the use of grid and snap, together with the co-ordinate display to produce basic measured objects
2. Demonstrate the of an absolute X,Y co-ordinate system to produce basic measured objects through keyboard entry
3. Demonstrate the use of a relative X,Y co-ordinate system to produce basic measured objects through keyboard entry
4. Demonstrate the use of a relative polar co-ordinate system to produce basic measured objects through keyboard entry
5. Use a range of co-ordinate entry systems to produce varying levels of complex drawings
6. Place different shapes, including circles, rectangles, nodes and regular polygons at known co-ordinate points and to specific sizes

7. Use hatch, text and simple dimensioning routines

The learner will be able to:
1. Set up different styles of text for use on a drawing
2. Perform a direct text entry method to create notes on a drawing
3. Demonstrate the use of an alternative method of text entry to create notes on a drawing
4. Justify text during input
5. Perform basic dimension commands to dimension a drawing
6. Fill an area with a variety of hatch patterns at different scales and angles

8. Use basic editing commands and produce simple hard copies

The learner will be able to:
1. Use a range of commands to alter entities that have been previously drawn, including the following procedures
2. Use a range of commands to move, scale, copy and array existing objects within the drawing
3. Perform commands to produce a hard copy that fits an A4 sheet