

2D Combo course

CORRESPONDENCE – DISTANCE LEARNING

Introduction to Draughting & CAD Draughting in Bricscad

Course Duration: 9 Months

Time: Self-Study on your own time

The Bricscad™ Correspondence course will enable students to create a basic 2D drawing. Even at this fundamental level, Bricscad™ is one of the most sophisticated computer applications that you are likely to encounter. Part 1 covers the indispensable core topics for working with Bricscad™. The teaching strategy is to start with a few basic tools that allow the student to create and edit a simple drawing. Part 2 continues with more sophisticated techniques that extend your mastery of the program.

LEARNING OUTCOMES OF THIS COURSE

- Understanding the Bricscad™ workspace and user interface
- Draft basic drawings, objects and layers
- Organising drawing objects on layers
- Inserting reusable symbols (blocks)
- Prepare layouts and plots
- Add text, hatching and dimensions
- Using more advanced editing and construction techniques
- Creating local and global blocks
- Set up layers, styles and templates
- Draughting - Principals & Standards

Prerequisites:

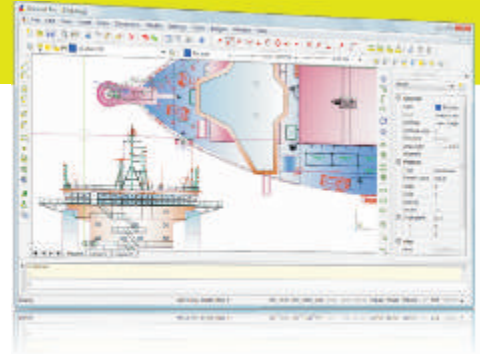
- A working knowledge of basic design/drafting procedures and terminology
- A working knowledge of Windows / Word Processor.

2D Combo course

Includes:

Bricscad™ Textbook - 2D Manual
Bricscad™ Workbook
Bricscad™ Study Schedule
Bricscad™ Interactive CD
Bricscad™ Academic Software CD
Draughting Course
Drawing Kit
A5 Notepad & Pen

NB: Certificate to be issued on completion of course.



Course Outline

Basic Principles of Engineering Drawing

- Introduction
- The History of Engineering Drawing
- What is Engineering Drawing?
- Engineering Drawing as a means of communication
- Important functions of Engineering Drawing
- The uses of Engineering Drawing
- The purpose of Engineering Drawing as a subject
- The drawing office
- Drawing equipment and instruments
- Drawing paper sizes
- The application of drawing instruments
- The alphabet of Engineering Drawing
- Printing letters and figures
- Examples of vertical capital letters and figures
- Dimensions

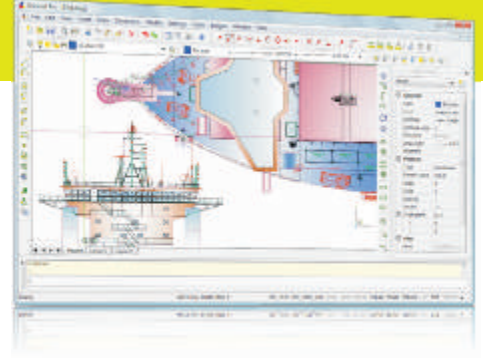
Free hand drawing

- Introduction
- Instruments used for freehand drawing
- Aspects of freehand drawing
- Freehand drawing of complex shapes
- Drawing horizontal lines
- Drawing vertical lines
- Drawing diagonal lines
- Freehand drawing of circles and arcs
- Freehand drawing using square-grid paper

Geometrical Constructions

- Introduction
- Instrument requirements
- Construction to bisect a straight-line segment
- Construction to bisect a 45° angle
- Construction of a 60° angle
- Construction to bisect a 60° angle
- Construction to bisect a 30° angle
- Construction of a 75° angle
- Construction of a perpendicular line from a given point on a line
- Construction of a perpendicular line from a given point outside a given line
- Construction of a perpendicular line at the end of a given line segment
- Construction of a parallel to another line at a given distance
- Dividing a given line segment into any number of equal parts
- Construction of an arc of a circle to lines forming a right angle





Course Outline

- Construction of an arc of a circle to lines forming an acute angle
- Construction of an arc of a circle to lines forming an obtuse angle
- Construction of an arc of a circle to a line and an arc or circle
- Construction of an arc of a circle to two arcs or circles
- Drawing a circle to pass through any points A, B and C
- Construction of an equilateral triangle
- Construction of a square: the inscribed-circle method
- Construction of a square: the circumscribed-circle method
- Construction of a hexagon: the across flats method
- Construction of a hexagon: the across-corners method
- Construction of an octagon: the across flats method
- Construction of an octagon: the across-corners method
- Construction of an ellipse

First-angle Orthographic Projection

- Introduction
- Visualisation
- What makes an orthographic view?
- Principles of first-angle orthographic projection
- Projection system symbol for first-angle orthographic projection
- Projection methods for first-angle for first-angle orthographic projection
- Reading an engineering drawing
- Setting up an orthographic projection drawing

Introduction & Installation

- Using CAD Commands
- Compare Bricscad to manual draughting
- Drawing to scale
- Organizing Information
- Drawing efficiently
- Online Help
- Installation

Bricscad Interface

- Understanding the Interface
- Customising the interface

Drawing in Bricscad

- Absolute Rules
- Drawing a line
- Using the Zoom Commands
- Using the Object Snaps

Editing Methods

- Copy objects
- Move objects
- Fillets and Chamfers
- Trim and Extend
- Scale
- Stretching / Lengthening

Layers

- Organising Objects with Layers
- Creating Layers
- Linetype Scales

Dimensions

- Dimension Toolbar
- Linear dimensions
- Aligned dimensions
- Ordinate dimensions
- Radius dimensions
- Diameter dimensions
- Angular dimensions

Text & Hatching

- Creating Text
- Editing Text
- Creating Hatches
- Editing Hatches

Blocks

- Creating Blocks
- Creating and Placing Symbols
- Placing Blocks at measured Intervals
- Exploding Objects

Layouts & Plots

- Templates
- Plotting drawings
- Model and Layout/Paper Space
- Setting up viewports
- Setting up Titleblocks