






Advanced Diploma in Graphic Design (992) – Advanced AutoCAD

Prerequisites: Excellent keystroking ability.	Corequisites: A pass or better in Diploma in Graphic Design or equivalence.
<p>Aim: This course introduces advanced CAD applications, including attribute and attribute extraction, external reference files, solid modelling, surface rendering and animation. Upon successful completion of this course, students should be able to use a CAD software package to develop animations consisting of 3D models with rendered surfaces. The Advanced AutoCAD course prepare candidates to work as a CAD manager. Completion of this course gives a thorough understanding of AutoCAD functions such as customizing AutoCAD. Candidates will be better able to increase the productivity of AutoCAD operators in an organisation office by gaining proficiency in these advanced AutoCAD functions. This hands-on course teaches AutoCAD's advanced features and commands that are not covered in the AutoCAD at Diploma level. It is designed to help candidates to work as AutoCAD Operators to work smarter and become more productive. Topics include file extensions, profiles, search paths, system variables, command aliases, script files, dynamic input, grips, dynamic blocks, layer states, layer filters, layer groups, attributes, tables, data extraction, workspaces, customizing toolbars, customizing pull-down menus, macros, dashboard panels, tool palettes, fields, advanced text, annotation, templates, and advance layouts. Candidates will be able to produce advanced application of construction architectural drawings using the power of 2D and 3D computer-aided drafting (CAD) as the medium for drafting. Advanced 2D detail views, electrical, mechanical, and plumbing. Candidates will be practice 3D drawings including floor plans, plot plans, elevations, perspectives, landscape, and detail views, utilizing several working drawings interfacing with a multi-pen plotter.</p>	
Required Materials: Recommended Learning Resources.	Supplementary Materials: Lecture notes and tutor extra reading recommendations.
<p>Special Requirements: This is a hands-on course, hence practical use of computers is essential. Requires intensive lab work outside of class time.</p>	
<p>Intended Learning Outcomes:</p> <ol style="list-style-type: none"> 1. Demonstrate how the linetype scale factor allows you to change the relative lengths of dashes and spaces between dashes and dots linetypes per drawing unit. 2. Demonstrate how direct distance entry allows showing angles and enter distances. 3. Demonstrate how to control the appearance of objects by setting and changing object properties. 	<p>Assessment Criteria:</p> <ol style="list-style-type: none"> 1.1 Explore the concept of layers 1.2 Be able to use the dimension command 1.3 Describe the text command 1.4 Explore linear dimensions 1.5 Be able to use radius dimension tool 1.6 Define aligned dimension 1.7 Be able to place diameter dimension on a circle entity 1.8 Explore the scale command 1.9 Describe associate, nonassociative and exploded 2.1 Define Direct Distance Entry 2.2 Outline how Direct Distance Entry works 2.3 Be able to use Direct Distance Entry 2.4 Describe polar tracking 2.5 Outline how to use object snap tracking 3.1 Describe object properties 3.2 Be able to extract object attributes 3.3 Explore how to work with layers

4. Demonstrate how AutoCAD helps in determining all of a project's requirements when it begins.	4.1 Explore requirements to draw a flow plan 4.2 Be able to produce steps to draw a flow plan
5. Demonstrate how AutoCAD remembers the last view changes, using the ZP aliases.	5.1 Explore zoom all command 5.2 Define the zoom centre command 5.3 Describe the dynamic zoom effect 5.4 Analyse zoom extent problems 5.5 Explore zoom previous option 5.6 Be able to use the zoom scale command 5.7 Describe the zoom window command 5.8 Distinguish zoom realtime vs pan realtime 5.9 Compare and contrast zoom and pan commands
6./ Demonstrate how to size and format text is as it will appear in the drawing.	6.1 Explore the process of formatting text 6.2 Be able to create new Textstyles
7. Demonstrate AutoCAD's model space and paper space environments.	7.1 Explore AutoCAD sheet tabs 7.2 Define paper space 7.3 Analyse how to scale in model space 7.4 Analyse how to rotate in model space 7.5 Describe how to switch between paper space and model space

**Recommended Learning Resources:
Advanced AutoCAD**

Text Books	<ul style="list-style-type: none"> • Exercise Workbook for Advanced AutoCAD by Cheryl Shrock. ISBN-10: 0831131977 • AutoCAD: Advanced Techniques by Craig Sharp & Walter Hamm. ISBN-10: 0880224363 • Advanced AutoCAD: Release 12 by Robert M. Thomas. ISBN-10: 0782111874
Study Manuals 	BCE produced study packs
CD ROM 	Power-point slides
Software 	AutoCAD