



**Technical Examination Board, Gujarat State,
Gandhinagar**

Desk Top Publishing System

Title	87 : Desk Top Publishing System
Level	Certificate Course
Course Duration	One Year (full time)
Entry Qualification	S. S. C. Pass or Equivalent
With Effect from	June 2023

Teaching and Examination System:

Sub Code	Subject Name	Teaching Scheme		Examination Scheme				Term Work Marks	Total Marks
		Theory	Practical	Theory Marks	Hrs.	Practical Marks	Hrs.		
871	Computer Fundamentals & Operating System	04	04	50	02	-	-	25	75
872	Fundamentals of Graphic Arts	04	-	50	02	-	-	25	75
873	Computer Aided Publishing	06	26	100	03	300	06	50	450
874	Professional Practice	01	-	-	-	-	-	50	50
875	Project Work Training	2 Months		-	-	50 (ORAL)	-	100	150
Total		15	30	200	-	350	-	250	800

Total Week = 32 Theory = 45 min

Total Teaching slot/Week = 45 Practical = 45 min

Theory Periods = 15 Total teaching = 34 hrs/week

Practical Periods = 30

87: Desk Top Publishing System

Course Objectives:

- Install and setup operating system and related software in a computer following safety precautions.
- Create, format, edit text file, document file and BMP file by using different Accessories of Windows.
- Create, edit, format and enhance document using word processing application software.
- Create, edit, format and enhance document using M.S. Excel application software.
- Create, edit, format and enhance Presentation using M.S. Power Point application software.
- Create, edit, format and expand Email using the Email Client (M.S. Outlook) application software.
- Introduce the Networking concept including sharing of different resources, use of Internet, accessing/ browsing, downloading and e-mailing.
- Create, format and edit different publication using publication software in design.
- Install and setup scanner and scan the documents and images.
- Create, format, edit and develop images using Adobe Photoshop software.
- Draw, edit, format and develop graphics design using Corel draw application software.
- Create, edit and format different types of publication using bilingual software.
- Print, bind and publish to form a full-fledged book format.

Course Subjects:

Sr. No	Sub Code	Subject Name	Theory in Hrs	Practical in Hrs
1	871	Computer Fundamentals & Operating System	96	96
2	872	Fundamentals of Graphic Arts	96	-
3	873	Computer Aided Publishing	144	624
4	874	Professional Practice	24	-
5	875	Project Work Training	2 Months	
	Total		360	720

871 : COMPUTER FUNDAMENTALS & OPERATING SYSTEM	
Unit-1	Safe working practices
1.1	Scope of the DTP course.
1.2	Safety rules and safety signs.
1.3	Types and working of fire extinguishers.
Unit-2	Basics of Computer
2.1	Introduction to computer components
2.2	Introduction to computer system. Concepts of hardware and software
2.3	Function of motherboard components and various processors
2.4	Various Input/ Output devices in use and their features
Unit-3	Introduction Windows Operating System
3.1	Introduction to operating System
3.2	Main features of Windows OS
3.3	Concept of various shortcut commands.
3.4	Introduction to the booting process.
3.5	Introduction to various types of memories and their features.
3.6	Basic Hardware and software issues and their solutions.
3.7	Usage of Application software and Antivirus.
Unit-4	Basic Accessories under MS-Window
4.1	Introduction of the basic Windows Accessories
4.2	Define text file and document file.
4.3	Introduction of the basic features of document file
4.4	Discuss the difference between document file and text file
4.5	Give the basic idea about image file including BMP and other format
Unit-5	Networking Concepts
5.1	Introduction to Computer Networks, necessity and advantages
5.2	Client Server and peer to peer networking concepts
5.3	Network topologies. Introduction to LAN, WAN and MAN
5.4	Network components, viz. Modem, Hub, Switch, Router, Bridge, Gateway etc.
5.5	Network Cables, Wireless networks and Blue Tooth technology

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5.6	Introduction to www, Concept of internet, web browsers, internet servers and search engines
5.7	Concepts of Domain naming Systems and email communication
5.8	Introduction to video chatting tools and social networking concepts
Unit-6	Scanning
6.1	Principle of scanning
6.2	Types of scanner (flatbed & drum) and its use
6.3	Resolutions, DPI, LPI, PPI
6.4	Graphics drawings inputs of pictures, sketches etc
6.5	Preparation of OCR. (06 hrs)

872 : FUNDAMENTALS OF GRAPHIC ARTS	
Unit-1	Introduction to Graphic arts –Printing
1.1	Define the term printing
1.2	Brief history of printing, its invention and development stages
1.3	Application of printing in various areas
Unit -2	Typography
2.1	Understand use of type with regard to suitability of job.
2.2	Point system and its application for measurement
2.3	Proof reading and its advantages in DTP
Unit -3	Know Print Media Techniques
3.1	Selection of type for text/display
3.2	Copy preparation
3.3	Designing and layout for various of printing products and finishing.
Unit -4	Introduction to Printing Processes
4.1	Listing various printing processes
4.2	Principles of the processes listed in
4.3	Techniques involved
4.4	Use of electronic media in each process listed in
4.5	Comparative analyses
Unit -5	Offset Printing/ Planography
5.1	Image generation on various image carriers in offset

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5.2	Types of offset machine – sheet fed and Web fed
5.3	Features of offset printing machines & their job suitability
5.4	Techniques for printing Single/multi color jobs through offset
5.5	CTP, Digital and other advancement in offset
5.6	How DTP useful for Offset?
5.7	Make ready of offset Printing
Unit -6	Intaglio / Photogravier Printing
6.1	Fundamentals of photogravure Machine
6.2	How most useful photogravure Printing Process
Unit -7	Screen and Other Printing processes
7.1	Fundamentals of Screen Printing techniques
7.2	Know how Screen Process Printing works?
7.3	Job suitability and know how DTP helps?
7.4	Thermography, Xerography etc.
Unit -8	Lamination
8.1	UV (Ultra Violate) Lamination
8.2	Hot Foil
8.3	Thermal UV
8.4	Wet UV (Glossy / Matt)
8.5	Spot UV, Emboss UV, Plain UV
Unit -9	Paper and Ink
9.1	Types of Paper and boards and their sizes
9.2	Types of printing inks
9.3	Importance of Paper and ink in relation to printing quality
9.4	Effect of various type faces on verities of paper
Unit -10	Know estimating and costing for various printing jobs
10.1	Term work is based on report of the visits of different Printing Press and duly assessed by the subject teacher.

873 : COMPUTER AIDED PUBLISHING

Unit-1	Office Application
1.1	Introduction

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1.2	Installation of MS office
1.3	Use and Benefits
Unit -2	Word Processing Software (Ms Word)
2.1	Introduction to Word features, Office button, toolbars.
2.2	Creating, saving, formatting and printing documents using Word.
2.3	Working with objects, macro, mail merge, templates and other tools in Word. (24 hrs)
Unit -3	Features of MS Excel
3.1	Introduction to Excel features, Office button, toolbars.
3.2	Creating, saving, formatting and printing Workbook using Excel.
3.3	Working with workbook window, standard bar, formatting bar, Formula bar, Data, Charts, and other tools in Excel. (24 hrs)
Unit -4	Presentation Software (Power Point)
4.1	Introduction to Power Point features, Office button, toolbars.
4.2	Creating, saving, formatting and printing presentation using Power point.
4.3	Working with slide, object, chart, table, smart art, make a animation, transition, slide Show, and other tools in Power point. (24 hrs)
Unit -5	E- mail client (Ms Outlook)
5.1	What is MS Outlook and its features
5.2	What is Outlook configuration
Unit -6	Page Layout Software: (in design)
6.1	Introduction to Adobe In Design.
6.2	Introduction to properties and editing of text.
6.3	Introduction of page layout, creating, saving, formatting and printing publication using In Design.
6.4	Working with objects, templates and other tools in In Design.
6.5	Preparation of page imposition. (30hrs)
Unit -7	Image Fundamentals and Image editing Software: (Photo Shope)
7.1	++Different type of images – pixel and vector – their properties and differences.
7.2	Introduction to the measurement of picture quality – resolution of picture and their quality depending upon the resolution.
7.3	Define the color property of picture – Tonal Value, Tonal gradation, Continuous tone and Half tone.
7.4	Introduce highlight, middle tone and shadow area of image.

Certificate course in Desk Top Publishing System

7.5	Discuss the property of various image file format.
7.6	Discuss the relation between pixel density and size of the image.
7.7	Introduce different tools and menus available in Photoshop. (36 hrs)
Unit -8	Graphics Designing Software (Corel Draw)
8.1	Introduction to line art design.
8.2	Define colour-define, different colour modes and colour wheel, showing primary, secondary and tertiary colour.
8.3	Introduction to features of Corel Draw and its toolbar and menu bar.
8.4	Creating, saving, formatting and printing graphics design using Corel Draw. (24hrs)
Unit -9	Bilingual Software
9.1	Introduction, need & overview of bilingual software. (12 hrs)
Unit -10	Printing
10.1	Principle of printing
10.2	Types of printer (Dot Matrix, Inkjet, Laser), flexographic printer and its uses.
10.3	Page orientation, paper size, auto flip, quality, color adjustment and take print out.
10.4	Preparation of project work for DTP unit.
10.5	Various binding techniques. (12hrs)
10.6	Design Inspection, Quality control aids
10.7	Output soft copy (C.D., Hard disk, Pen drive)
10.8	Hard copy (Paper, butter, film)
10.9	Image setter & RIP Station

874 : PROFESSIONAL PRACTICE	
Unit-1	Communication skill verbal written
Unit-2	Trade related standards & codes
2.1	Getting acquainted with..... <ul style="list-style-type: none">• New Software.• Upgraded version of software.• New Hardware.
Unit-3	Commercial aspect
3.1	Knowing the Tendering Procedure.
3.2	Definition of the following Terms

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	<ul style="list-style-type: none"> • Tender • Tender Notice • Earnest Money • Security Deposit. • Comparative Statement of tenders.
3.3	Knowing of Requirements of agencies with which to be dealt.
3.4	Knowing the requirement of Municipality to start office.
3.5	Knowing the requirement of Electricity supplying Agency to get the electric connection.
3.6	Knowing the requirement of sales tax Department to get necessary sales tax number.
3.7	Knowing the requirement of a customer to get his/her job accomplished.
Unit-4	Entrepreneurship as self-employment related with finance.
4.1	Knowing the qualities and functions of entrepreneur.
4.2	Knowing the functions of the Agencies for promotion and Development of entrepreneur.
4.3	Prepares & submits the project report to start his own unit.
Unit-5	Computer consumables and Equipment purchase Specification.
5.1	Knowing the needs of computer consumable & equipment necessary for his unit.
5.2	Knowing the detailed specification of all the materials and equipment necessary for his unit.
5.3	Knowing the purchase procedure of all the materials & equipment necessary for his unit.
5.4	Knowing the procedure of selection of the materials & equipment.
Unit-6	Duties & functions in World of Work.
6.1	Knowing his own functions in the engineering unit.
6.2	Knowing the procedure of getting work from his higher rank officer.
6.3	Knowing the procedure of getting materials needed to complete his work.
6.4	Knowing the procedure submitting his completed work to the competent authority.
6.5	Understands the importance of time factor in the work. Understands the importance of accuracy in the work.
6.6	Understands the importance of good behaviour with colleagues and Officers.

875 : PROJECT WORK TRAINING

Certificate course in Desk Top Publishing System

- Preparing of Business Stationery (A complete set - Visiting Card, Letter head, Receipt, Delivery Memo, Invoice, etc).
- Prepare Annual Report / Magazine.
- Prepare Wall and Table Calendar
- Prepare Newspaper (Minimum 12 Page)
- Prepare Text Book
- Prepare Brochure
- Prepare Map Book
- Designing Cartoon for packaging

Note:

1. A Student is required to select Any Two Project/s from the above list, which can be completed during Project work Training Period.
2. Each Student will have to Design his / her own Style Sheet and work upon the same.
3. A Hard Copy of the Project should be prepared and submitted to the institute.

Suggested List of Practical

Sr. No	Practical Name
1	Identifying safety symbols and hazard identification
2	Practice safe methods of fire fighting in case of electrical fire.
3	Use of fire extinguishers.
4	Visit DTPO Lab of the institutes and locate the electrical connections with computer system setup.
5	Identify computer peripherals and internal components of a disassembled desktop computer.
6	Assemble components of desktop computer.
7	Practice on Windows interface and navigating windows.
8	Practice on managing files and folders using removable drives.
9	Customize the desktop settings and manage user accounts.
10	View system properties and control panel details.
11	Work with keyboard shortcut commands.
12	Print and scan document using different commands.
13	Install Windows operating system.
14	Install necessary application software for Windows i.e. Office Package, PDF Reader, Media Player etc. and removing them using the control panel
15	Install Drivers for sound printer, scanner, webcam and DVD etc. (04hrs)

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16	Burn data, video and audio files on CD/DVD using application software.
17	Installing or adding Fonts
18	Understanding patches, upgrades, versions and installing them.
19	Disk cleanup
20	Regular updating of antivirus software
21	Scandisk
22	Backups in detail including the following: <ul style="list-style-type: none"> • Backup through Application • Backup through Utilities and Tools • Record Retention
23	Troubleshooting: <ul style="list-style-type: none"> • Troubleshooting Tools • Troubleshooting Viruses • Troubleshooting Fundamentals • Problems that keep a computer from starting • Troubleshooting OS • Problems after a Computer Boots
24	Practice to create text file by Notepad and edit file by using different menu under notepad.
25	Practice to create Document file in Word, and edit and format file by using different tools available under Word.
26	Practice to create basic symbols by using MS Paint and format the drawing by using different tools available.
27	Install network printer.
28	Use of file and printer sharing in peer to peer connection.
29	Browse the Internet for information (use at least 3 popular browsers).
30	Practice to create and use e-mail for communication with attachment, priority setting, address book.
31	Communicate with text, video chatting and social networking sites.
32	Use online dictionary, translation software, storage space, share files with e-mail links, download manager, download & upload YouTube files, google map & earth etc. Update windows & other software.
33	Configure Outlook, mail service in mobile phones. Use tools like Skype, Google etc.
34	MS Outlook including using managing & organizing e-mail messages, schedules tasks, notes, contacts & other information.

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35	Download different font file and install it in local machine. Download different type of suitable image and insert within publication.
36	Install scanner and use scanner to scan picture, line drawing and document. (10hrs)
37	Select scanner resolution and adjust highlights, middle tone, shadow, contrast, brightness, saturation. (06 hrs)
38	Read colour strip and do colour correction. (06 hrs)
39	Making of OCR. (08 hrs)
40	Practice typing using open source typing tutor.
41	How to change language English to Gujarati (google input method)
42	Introduction about the Gujarati Keyboards(google input method)
43	Introduction about the Gujarati IME. Difference between Remington and Transliteration K/B.
44	How to operate the K/B. What is Transliteration K/B. (google input method)
45	How to type different Characters and Words from transliteration K/B.
46	How to use IME help? How to use spelling grammars check in Gujarati?
47	What is smart Tag? What is Thesaurus?
48	How to change the menu from English to Gujarati
49	Convert the ASCII font to Unicode from TBIL Converter
50	Open MS Word and familiarize with basic word components. (02hrs)
51	Practice creating, saving and renaming word documents. (02hrs)
52	Use templates to create New Word document. (02hrs)
53	Edit document using basic character formatting and paragraph formatting tools.
54	Practice to create and format Tables including Table Formatting Tool. (08hrs)
55	Practice to create page layout including insert column by using Page Formatting. (04hrs)
56	Use Auto Correct tool and customize Auto correct option. (04hrs)
57	Insert Header/Footer, symbols, Equations, Page Number, Foot Note, End Note, Citation, pictures including Clip arts. (06hrs)
58	Format Header/Footer, Picture by using respective formatting tool. (05hrs)

Certificate course in Desk Top Publishing System

59	Enhanced document by adding Page/ Paragraph border, shading and enhancement features like include pictures within document in proper place.
60	Use hyperlink, bookmark, cross reference within document and also establish link with other formatted file. (06hrs)
61	Use spell check, grammar, translate, synonyms, thesaurus. (06hrs)
62	Use mail merge tool. Use conditional Mail Merge, External Data Source. Practice Letters, Label & Envelop printing using Mail Merge. (10hrs)
63	Practice to create, record and execute Macro. (03hrs)
64	Practice of using shortcut keys in Word Processor. (12 hrs)
65	<p>MS Excel Window</p> <ul style="list-style-type: none"> • Title bar, Menu bar, workbook window, standard bar, formatting bar, Formula bar, Drawing tool bar, Creating new workbook /Opening existing workbook, Page set-up, Work book storing, Viewing option, Working workbook.
66	<p>MS Excel Window</p> <ul style="list-style-type: none"> • Use of various tools, word art, charts, picture editing etc.
67	Introduction of Power point
68	Use and Application for DTP
69	Transferring power point files in other software
70	Open InDesign and familiarize with basic screen component of opening screen of In-Design Window.
71	Practice creating, saving InDesign document.
72	Introduce tool box and practice different tools.
73	Practice to set Margin, Facing Page & column guide and type the text according to layout.
74	Practice to create threaded and un-threaded text block.
75	Format character including font style, size, leading, tracking, kerning.
76	Open Adobe Photoshop and familiarize with basic screen component of opening screen of Photoshop Windows.
77	Practice creating new canvas using existing canvas size, save it and again open it
78	Create new layers by duplicating layer, via copy layer or cut layer. Practice different properties like visibility, transparency, opacity and blending mode of layers.

Certificate course in Desk Top Publishing System

79	Practice rearranging layer, lock layer, merge down, visible, flatten layer.
80	Practice to select images of pixel format by using Marquee-Rectangular/ Elliptical/ single row/single column, Lasso, Polygonal Lasso, Magnetic Lasso, Magic, wand tool.
81	Practice to edit pixel images by using crop, slice, healing brush, brush, history brush, eraser, blur, dodge, smudge, burn, clone, clone stamp tool in standard mode and quick mask mode.
82	Practice to change the background of image, cut one portion of image and place on the other image. Change eye colour, hair style, colour of garment.
83	Change default foreground and background colour from the tool box and also create/ edit/ delete colour by colour swatches and apply the colour on the drawn image by using paint bucket and gradient tool. Also create own pattern style.
84	Practice to type text by using horizontal and vertical type tool and format the text by using different options available on property bar.
85	Practice to create horizontal and vertical type mask tool and colour it by using paint bucket and gradient tool.
86	Draw paths by using pen tool, using different inbuilt shape, edit paths using anchor point and change the property from the property bar. Also rasterize the path (from vector to pixel).
87	Practice to see image by using different display options.
88	Apply different layer properties like shadow, bevel and emboss, satin, colour and pattern overlay.
89	Edit images by changing colour mode(B/W to Colour and Colour to B/W), brightness contrast, hue and saturation, colour label, changing pixel dimension and re-sampling images.
90	Apply different filter effects like render, 3D transform, lens flare, lighting effects, motion blur, radial blur and artistic effect on image.
91	Practice to create artificial rainbow, cloud, waves, shadow, star, sun on the image.
92	Save the file in other format like JPEG, PSD, PDD, TIFF, GIF, WMF and also create PDF presentation.
93	Print image by using different options available in print menu with composite and separating color.
94	Open Corel Draw and familiarize with basic screen component of opening screen of Corel Draw Windows.

Certificate course in Desk Top Publishing System

95	Practice creating new file, draw any simple graphics design save it and again open it.
96	Draw graphics by using different tools like free hand, Bezier, pen, artistic media and also draw different geometrical shape using pre-define shape available in tool box.
97	Edit, rotate, resize, reposition, scale and apply fill and border colour on graphics design.
98	Apply different fill like solid, fountain, pattern, texture, postscript to the object using predefined library and also creating own fountain, pattern and texture.
99	Draw different type of outline of the object and colour it using outline pen tool.
100	Practice to edit drawing (convert into curve) by manipulating three types of nodes using shape tool and apply different properties available property bar.
101	Practice to edit drawing by using knife, eraser tool and apply the different properties available on the property bar.
102	Write artistic and paragraph text by using text tool and format the text using different options available in character and paragraph pallet.
103	Practice to group/ ungroup, combine/ break curve apart, lock/unlock the objects and wrapping text around the object.
104	Practice to apply different interactive effect on object like blend, contour, drop shadow, extrude, envelop and transparency. Apply different properties associated with specific effect also apply the effects available from blend, contour, drop shadow, extrude, envelop and transparency from the menu bar.
105	Apply different alignment on the object with respect to object themselves and page.
106	Apply different shape like weld, trim, intersect on the object using shaping pallet.
107	Apply all the options available under text menu on paragraph and artistic text.
108	Export text and graphics from Corel Draw to PDF and other web format.
109	Import graphics (pixel) from outside and apply different options available in bitmap menu.
110	Set INSCRIPT key board (any regional language/ Hindi) in Windows environment and practice typing by using any word processor.

Certificate course in Desk Top Publishing System

111	Install any bilingual software like iLeap Office/ ISM/STM software and create solid and tabular text document
112	Practice of various tool of Android Mobile Use in D.T.P. <ul style="list-style-type: none">• Google Lance• Adobe Scan• Google Translate• Google Input Tools• Speech To Type

Reference books:

- BPB's Computer Course Windows 10 with MS Office 2016, Prof. Satish Jain, BPB Publication
- Basics Of Designing - Desktop Publishing: With Step-by-step Instructions, Screenshots, Colour Pages & Cd Script, Bittu Kumar, V & S Publisher
- Hand Book of Printing, Packaging and Lamination : Packaging Technology, Shrikant P. Athavale, Notion Press
- Desk Top Publishing, Kirty Wilson
- Desk Top Publishing Skill, James Falio and Ted

Software list:

- MS Office: 2019 (professional) or the latest version available at the time of procurement (25 Licenses)
- Antivirus for – clients / workstations in profile: Validity of an year or more which should be renewed upon expiry (25 Licenses)
- Corel Graphic Suite: Version 2021 or the latest version available at the time of procurement (25 Licenses)
- Adobe Creative Suite: Version 2021 or the latest version available at the time of procurement (25 Licenses)
- Regional Language Software: Ileap/Swarna Type Manager/Any Other Bilingual Software (25 Licenses)
- GIMP / Infra View Image editor or equivalent: Latest version (Open source software)

Subject Course Committee

Sr No	Name	Designation & Address
1	Prof. S. M. Shah	Professor, Computer Engineering, GEC, Gandhinagar.
2	Dr. Vibha Patel	Professor, I.T. Engineering, V.G.E.C, Chandkheda.
3	Prof. J. S. Dhobi	Associate Professor, Computer Engineering, GEC, Gandhinagar.
4	Prof. M. P. Paramar	HOD, I.T. Engineering, R.C.T.I, Ahmadabad.
5	Prof. M. P. Mehta	HOD, Computer Engineering, GP Gandhinagar.

Invited Expert

Sr No	Name	Designation & Address
1	Shri D R. Modi	Vocational training centre, Patan
2	Shri J.M. Jansari	Vocational training centre, Patan
3	Shri S.M. Macwan	Xavier Technical Training Centre, Gamadi Anand
4	Shri K.A.Surti	Navsari Technical Institute, Navsari