GUJARAT TECHNOLOGICAL UNIVERSITY, AHMEDABAD.

COMPUTER APPLICATIONS

1.   RATIONALE :

Computers are now-a-days necessary in human routine life. At each and every stage, we find its importance. In technical side, engineers are using computers extensively to solve their design problems, to create and to generate optimum designs, to prepare the design drawings, and preparations of project reports and routine correspondence, including site reports, critical decision support tables and summerising the facts in feedback.

Engineering drawing is an effective language for artisan to chief engineer. Here, an attempt is made to generate different skills like drawing an object through AutoCAD, report writting through MS-Word and to generate work sheets, data manipulation, graphs, for decision support system through MS-Excel.

2.   TEACHING SCHEME :

Sr. No.	Topics	Theory Hrs.	Practical Hrs.	Total Hrs.
1.	Introduction to Computer system and software, operating environments and Windows	—	04	04
2.	Introduction to CAD, Drawing & Editing drawing	—	30	30
3.	Report Writing using MS-WORD	—	06	06
4.	Worksheet & Graph preparation using MS-EXCEL	—	12	12
5.	Introduction to Internet	—	04	04
	Total Hours	**—**	**56**	**56**

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3. OBJECTIVES :-

- Understand computer applications and its software requirements.
- Know operating system and its use.
- Use operating system commands.
- Appriciate the use of computerized drafting.
- Identify the main menu and other menu options of AUTOCAD, Window, Word and Excel
- Draw any given Engineering drawing
- Measure length and area of displayed object
- Edit stored drawing
- Edit stored report
- Distinguish different softwares
- Print/Plot the drawing, report, letter.
- Appriciate the concept of Graphics user Interface
- Operate computer system.
- Apply parameter passing tachiniques using dialouge boxes.
- Understand the economy factor.
- Handle multiple reports.
- Relate different data
- Select the software according to use requirement.
- Print the table/report/drawing
- Transfer the document to other computers using floppy
- Identify the menu/toolbar/dialog box/settings
- Identify different hardware of the computers
- Modify drawings/reports as per requirements.

4. LIST OF LABORATORY EXPERIENCES TO BE PERFORMED IN SEQUENCE

Sr. No.	Laboratory Experience	Treatment
1.	Introduction to the computer system and computer software	Demonstration and use
2.	Introduction to the operating system, file	"

	identification, extension, bytes, directory.	
3.	Introduction to CAD software, Co-ordinate system, ACAD drawing files, save, quit, end	Demonstration and use
4.	Use commands POINT, LINE, P.LINE, OFFSET, ORTHO	"
5.	Draw CIRCLE, ELLIPSE	"
6.	Draw ARC with its various options	"
7.	PDMODE, DIVIDE, MEASURE Command	"
8.	Use of commands like BREAK, TRIM, ERASE, OSNAP, REDRAW	"
9.	Use of commands like UNITS, UCS, LIMITS, SNAP, GRID, ZOOM, PAN	"
10.	Use of commands like PEDIT, DONUT, POLYGON, COPY, MIRROR, MOVE	"
11.	Use of commands like ARRAY, CHAMFER, FILLET, SOLID, OOPS	"
12.	DIMENSION BY DEFAULT & BY REQUIREMENT	"
13.	TEXT BY DEFAULT & STYLE REQUIRED	"
14.	BLOCK, INSERT, MINSERT, HATCH	"
15.	LAYER ,COLOR ,LINETYPE	"
16.	LAYER SETTINGS	"
17.	PRINT DRAWING	"
18.	One drawing Preparation	Assignment
19.	Introduction to WORD processor, data entry, save, quit, retrive.	Demonstration and use
20.	Basic settings, page layout, sizing, left and right margins, justification, tabulation	"
21.	Editing text using deleting character, word, line, etc. search and replace, cut, copy, paste, move, sort file read and write file.	"
22.	Introduction to worksheet, workbook, cell, row, column, dataentry, open, save, quit, help	"
23.	Editing data, clean, insert, delete/copy/move cell/row/ column, formula and function for data entry,	
24.	Worksheet settings, width of column, colour, heading, hide & display, align data, bold, italics, orientation Freeze cell/row/column, split, sort, filter	"

25.	Chart sheet, save, colour types, legend	"
26.	Prepare a worksheet and preview, page break, margins, header, footer, gridlines.	
	Print a worksheet, workbook, workbook reference, managing directory and hard disc.	Demostration and use "
27.	Introduction to Internet	"
28.	Introduction to web page language.	"

5.   REFERENCES

1. Mastering AUTOCAD   George Omura
2. Inside AUTOCAD   Raker & Rice
3. MS Office Instant Reference
4. Windows Inside   Peter Norton
5. Teach Yourself WINDOWS   Al Stevens
6. DOS Instant Reference