

GUJARAT TECHNOLOGICAL UNIVERSITY, AHMEDABAD, GUJARAT COURSE CURRICULUM

Course Title: Basic of Computer & Information Technology
(Code: 3300013)

Diploma Programmes in which this course is offered	Semester in which offered
Biomedical Engineering, Electrical Engineering, Electronics & Communication	First Semester

1. RATIONALE

This subject envisages making the student know the fundamentals of Computer Application. It will also helps the student to have hands on experience on different application software used for office automation like MS-Word, MS-Excel and MS-PowerPoint, day-to-day problem solving, in particular for creating business documents, data analysis and graphical representations.

2. LIST OF COMPETENCIES

The course content should be taught and implemented with the aim to develop different types of skills leading to the achievement of the following competency:

- i. Use MS Office software for word-processing, data analysis and preparing presentations
- ii. Create a webpage

3. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P)	Examination Scheme				Total Marks
				Theory Marks		Practical Marks		
L	T	P	C	ESE	PA	ESE	PA	100
0	0	0	4	00	00	40	60	

Legends: L-Lecture; T – Tutorial/Teacher Guided Theory Practice P - Practical; C – Credit;
ESE - End Semester Examination; PA - Progressive Assessment.

4. DETAILED COURSE CONTENT

Unit	Major Learning Outcomes	Topics and Sub-topics
Unit – I Basics of Computer System	1.1 Describe computer hardware and software 1.2 Identify I/O devices 1.3 Describe functioning of CU ALU and memory unit 1.4 Differentiate various types of printers 1.5 Explain use of OS 1.6 Demonstrate various file handling operations	Basics of Computer System 1.1 Concept of Hardware and Software 1.2 Computer block diagram 1.3 Input Output unit 1.4 CPU, Control Unit, Arithmetic logic Unit (ALU), Memory Unit 1.5 Monitor, Printers: Dot matrix, Laser, Inkjet, Plotters, Scanner 1.6 System software and Application Software 1.7 Operating system concepts, purpose and functions 1.8 Operations of Windows OS. 1.9 Creating and naming of file and folders 1.10 Copying file, renaming and deleting of files and folders, 1.11 Searching files and folders, installation application, creating shortcut of application on the desktop 1.12 Overview of control Panel, Taskbar.
Unit– II Using MS - Word 2007	2.1 Use basics text formatting features 2.2 Manipulate text 2.3 Use page Setup features 2.4 Use spell and grammar utility 2.5 Work with graphics/ clipart 2.6 Create and manipulate table 2.7 Use auto shapes and its formatting with text	Using MS - Word 2007 2.1 Overview of Word processor 2.2 Basics of Font type, size, colour, 2.3 Effects like Bold, italic , underline, Subscript and superscript, 2.4 Case changing options, 2.5 Inserting, deleting, undo and redo, Copy and Moving (cutting) text within a document, 2.6 Formatting Paragraphs and Lists 2.7 Setting line spacing; single 2.8 Page settings and margins including header and footer 2.9 Spelling and Grammatical checks 2.10 Table and its options, Inserting rows or columns, merging and splitting cells, Arithmetic Calculations in a Table. 2.11 Working with pictures, Inserting Pictures from Files, 2.12 Using Drawings and WordArt; Lines and Shapes, Modifying Drawn Objects, Formatting Drawn Objects, options for Creating and Modifying a WordArt Object

Unit	Major Learning Outcomes	Topics and Sub-topics
Unit– III Using MS - Excel 2007	3.1 Use basic formatting and data entry features 3.2 Use formula and functions 3.3 Work with graphics 3.4 Create and manipulate charts 3.5 Use header and footer options 3.6 Setup page layout and print worksheet	Using MS - Excel 2007 3.1 Introduction to Excel 2007, 3.2 Introduction to data, Cell address, Excel Data Types, Concept of hyperlink 3.3 Introduction to formatting, number, text and date formatting 3.4 Concept of worksheet and workbook 3.5 Understanding formulas, Operators in Excel 2007, Operators Precedence, Understanding Functions, Common Excel Functions such as sum, average, min, max, date, transpose, In, And, or, sqrt, power, upper, lower. 3.6 Types of graphics : Word art, auto shapes , Images 3.7 Introduction to charts, overview of different types of charts available with Excel 3.8 Concept of print area, margins, header, footer and other page setup options
Unit – IV Using MS - PowerPoint 2007	4.1 Create new presentation and apply basic formatting features 4.2 Use master slide 4.3 Create and manipulate table 4.4 Work with objects and clips 4.5 Work with video 4.6 Work with audio 4.7 Use special effects 4.8 Use navigation and hyper linking	Using MS - PowerPoint 2007 4.1 Outline of an effective presentations, 4.2 Starting a New Presentation Files, Saving work, 4.3 Creating new Slides, Working with textboxes. 4.4 Changing a slides Layout, Applying a theme, Changing Colours, fonts and effects, Creating and managing custom Colour & font theme, Changing the background 4.5 Managing slides master, Managing theme. 4.6 Changing the font, font size, font colour, text fill, 4.7 Adjusting character spacing and line spacing Formatting text boxes. 4.8 Word arts, styles, 4.9 Formatting bulleted lists and numbered list, 4.10 Finding and replacing text, Correcting your spelling 4.11 Creating a new and editing a table's structure, 4.12 Selecting, deleting, moving, copying, resizing and arranging objects, 4.13 Working with drawing tools, Applying shape or picture styles, Applying object borders, object fill, object effects. 4.14 Working with clip art collection and modifying clip art, 4.15 Embed a video, Link to a video, Size a video, Video playback options, 4.16 Configuring a sound playback, Assigning sound to an object, Adding a digital music sound track, Transition effects and timings,

Unit	Major Learning Outcomes	Topics and Sub-topics
		4.17 Creating hyperlinks, Using action buttons
UNIT-V MS-OFFICE INDIC & TBIL	5.1 Create application and other documents in Gujarati.	5.1 Introduction about MS Office Indic 5.2 Installation of ms-office indic 5.3 How to change language English to Gujarati 5.4 Introduction about the Gujarati keyboards 5.5 Introduction about the Gujarati IME. 5.6 Difference between Remington and 5.7 Transliteration K/B 5.8 How to operate the K/B. What is 5.9 Transliteration K/B? 5.10 How to type different Characters and Words 5.11 from transliteration K/B 5.12 How to use IME help? How to use spelling 5.13 grammars check in Gujarati? 5.14 What is Smart Tag? What is Thesaurus? 5.15 How to change the Menu from English to Gujarati? 5.16 Convert the ASCII font to Unicode from TBIL Converter
UNIT-VI Introduction to Internet HTML	6.1 Use internet access efficiently.	6.1 What is the Internet? 6.2 Web pages 6.3 Home page 6.4 Use of web sites 6.5 Access providers 6.6 Types of access 6.7 The browser 6.8 Universal resource locators 6.9 Browsing or surfing the web 6.10 A search engine 6.11 Internet phone Applications of the Internet: 6.12 E-mail 6.13 Voice mail 6.14 Newsgroup 6.15 Mailing list 6.16 Internet relay chat 6.17 Games 6.18 Video-conferencing 6.19 File transfer protocol
Unit – VII Using HTML	7.1 Comprehend the HTML page structure 7.2 Use basic formatting tags in HTML 7.3 Create and format tables	Basic structure of HTML 7.1 Structure of HTML Page 7.2 Inserting formatting tags for Text: bold, italic, underline, line break, special character, predefined headings, paragraph,

Unit	Major Learning Outcomes	Topics and Sub-topics
	7.4 Insert and format images in HTML page 7.5 Create various types of hyper linking 7.6 Work with video and sound files	comments. 7.3 Font color, size, Alignment 7.4 Margin with body tag, background and text colour 7.5 Ordered and unordered lists Tables, Images and Links in HTML 7.6 Tables – basic structure, Using TD, TR, TH tags, use of basic elements in table : border, cellpadding, cellspacing, width, caption, align, bgcolor 7.7 Images in web page: inserting and formatting of images using SRC, border, Vspace, Hspace, align, ALT, height, width and background in HTML page 7.8 Types of links: Linking two or more web pages, linking within a web page, linking to external page, linking to a specific point in another web page, linking image file, mailto. Working with Multimedia Objects 7.9 Video and sound file. Add marquees of scrolling text. Inserting and controlling video and audio in HTML page

5. SUGGESTED SPECIFICATION FOR DISTRIBUTION OF HOURS AND MARKS (THEORY)

Not Applicable

6. SUGGESTED LIST OF EXERCISES/PRACTICAL/EXPERIMENTS

The exercises/practical/experiments should be properly designed and implemented with an attempt to develop different types of skills leading to the achievement of the competency. Following is the list of exercises/practical/experiments for guidance.

S. No.	Unit No.	Experiment
1	I	<ul style="list-style-type: none"> • Create and manage files and folder tree • Use accessories utilities of windows OS
2	II	<ul style="list-style-type: none"> • Entering and editing text in document file. • Apply formatting features on Text like Bold, Italics, Underline, font type, colour and size. Apply features like bullet, numbering • Create documents, insert images, format tables • Create and manipulate tables
3	III	<ul style="list-style-type: none"> • Entering and editing data in worksheet • Apply formula and functions in the sheet • Use graphics and auto shapes in Excel sheet • Create and manipulate EXCEL charts • Create Pay bills, Pay slips, Electricity bills using Excel

		<ul style="list-style-type: none"> • Print sheet using print area
4	IV	<ul style="list-style-type: none"> • Basic operations of Power point, Create PPT and inset and delete slides • Create Project presentations, Lecture presentations. • Use of Mater Slide in Presentation • Apply basic formatting features in presentation like font, font size, font colour, text fill, spacing and line spacing Formatting text boxes, word arts, styles bullet and numbering • Working with drawing tools, Applying shape or picture styles, Applying object borders, object fill, object effects. • Working with video, Link to video and sound files. • Creating hyperlinks, Using action buttons
5	V	<ul style="list-style-type: none"> • Installation and keyboard setting of Gujarati indic. • Create invitation letter in Gujarati using indic
6	VI	<ul style="list-style-type: none"> • Practice browsing of different sites using search engine • practice and understand different E-Mail services – Outlook, Yahoo mail, rediffmail etc • Practice Creating E-Mail accounts, Sending, Receiving & Storing of mails.
7	VII	<ul style="list-style-type: none"> • Basic program of HTML • Program based on Inserting formatting tags for Text: bold, italic, underline, line break, special character, predefine headings, paragraph, comments. • Use Font color, size, background and Alignment • Create ordered and and unordered list • Create program on Tables – basic structure, Using TD, TR, TH tags, use of basic elements in table : border, cellpadding, cellspacing, width, caption, align, bgcolor • Working with Images in web page: inserting and formatting of images using SRC, border, Vspace, Hspace, align, ALT, height, width and background. • Program based on Linking two or more web pages, linking within a web page, linking to external page, linking to a specific point in another web page, linking image file, mailto. • Working with Video and sound file.

7. SUGGESTED LIST OF PROPOSED STUDENT ACTIVITIES

Following is the list of proposed student activities like: course/topic based seminars, internet based Assignments, teacher guided self learning activities, course/library/internet/lab based mini-projects etc. These could be individual or group-based.

Learning Strategies

Learning Computer application in the class room takes place through activities like reading individually and in groups, discussion, debate, and quiz, seminars preparing notes, observation and program writing. Preparation for practical work also should take place in the class room. Preparation notes for laboratory work, design steps and data are some of the things that have to be developed in the class room before the practical work in the laboratory. Among these, individual activities such as assignment and self-check questions given in the text book could be done at Home. But they have to be discussed in the class room. The students should also record such assignments in the note book. The teacher should give clear instructions as to what are the activities to be done at home and how they could be done. On the Job Training (OJT) and Field visit have to be conducted and the report should be prepared by the students. The teacher should give clear instruction to prepare reports.

Evaluation Activities for CE

The continuous evaluation may include the following activities;

1. Class Test
2. Assignment
3. Seminar/Symposium
4. Project
5. Collection/Records
6. Group discussion/Debate

For continuous evaluation of lab activity

S.NO	Content	Max. Marks
1	Lab Record	05
2	Answer one question from Computer Basics & Internet	10
3	Writing steps on any two (one each from Section – II, III)	15
4	Executing of two exercises	40
5	Result /Printout	10
6	Viva voice	20
Total		100

8. SUGGESTED LEARNING RESOURCES**A. List of Books**

Sr. No.	Author	Title of Books	Publication
1	R Taxali	Computer Course	Tata McGraw Hills. New Delhi.
2	Xavier	World Wide Web design with HTML	Tata McGraw Hills. New Delhi.
3	CURTIN, FOLEY, SEN, MORIN	INFORMATION TECHNOLOGY	TMH
4	V. RAJARAMAN (3RD EDITION)	FUNDAMENTALS OF COMPUTERS	PHI
5	CISTEMS	INTERNET AN INTRODUCTION	TMH
6	SAGMAN	MICROSOFT OFFICE FOR WINDOWS('O' LEVEL DOEACC)	PEARSON EDUCATION ISBN 81-7808-341-8
7	C. XAVIER	WORLD WIDE WEB DESIGN WITH HTML	TMH
8	COURTER	MASTERING MS OFFICE - 2000 PROFESSIONAL	TECHMEDIA
9	DAVID D.BUCH	PAGEMAKER 6.5 /7	BPB PUBLICATION
10		PHOTOSHOP 6/ 7	BPB PUBLICATION

		COMPLETE	
11	SHROFF	INTRODUCTION TO INTERNET AND HTML SCRIPTING 3RD ED	
12	T R JAGADISH ET	A COMPUTER LABORATORY REFERRAL FOR DIPLOMA & ENGINEERING STUDENTS	AL UNIVERSITIES PRESS

B. List of Major Equipment/ Instrument

- I. COMPUTER
- II. PROJECTOR
- III. EQUIPMENTS LIKE PRINTER,SCANNER,PLOTTER,MODEM

C. List of Software/Learning Websites

- I. Microsoft Office Professional 2010
- II. Norton Antivirus 2012
- III. Window 7.0
- IV. MS-OFFICE Indic

9. COURSE CURRICULUM DEVELOPMENT COMMITTEE

Polytechnic Faculty Members

- Prof. T.R.PARMAR, Lecturer in E.C, G.P.PALNAPUR
- Prof. G.V.PARMAR ,Lecturer in E.C., A.V.P.T.I. RAJKOT

NITTTR Bhopal Co-ordinator and Faculty Member

- Dr Sanjay Agrawal, Prof. and Head Dept. Of Computer Engg. And Applications, NITTTR, Bhopal
- Dr. M A Rizvi, Associate Prof. Dept. Of Computer Engg. And Applications, NITTTR, Bhopal