Lecture-wise Plan

Subject Name: Computer Architecture & Systems Software
Year: 1st Year

Code- BCA201
Semester: Second

Module Number	Topics	Number of
		Lectures
	Introduction:	4L
4	Microprocessors (8085 features)	
1		2L
	Bus structure, Data representation, Register	
	transfer and micro-operations	
	Central processing unit	2L
	Parallel Processing:	7L
2	Basic concepts, instruction and arithmetic pipeline	2L
	Array processing	2L
	Vector processing	3L
	CPU Organization:	9L
3	Computer arithmetic, Input-output organization	2L
	Memory organization	2L
	CPU architecture	3L
	Instruction format, addressing mode, stacks and handling of interrupts	2L
	Computer Organization:	6L
4	Basic computer organization and design,	2L
4	Programming the computer with assembly language (same basic applications),	2L
	Micro-programmed control.	2L
	Total Number Of Hours = 26	

Lecture-wise Plan

Assignment:

Module-1(Introduction)

- 1. What's the difference between RAM and ROM?
- 2. Describe Memory hierarchy.
- 3. Explain Micro operation In Computer System

Module-2(Parallel Processing)

- 1. Explain Vector Processing unit
- 2. Define the various types of vector instructions.
- 3. Describe different types of architecture of vector processor.
- 4. What is Array Processor? Why computer need array processor?

Module-3(CPU Organization)

- 1. Discuss Different type of pipeline Hazard
- 2. Cache memory systems are designed such that the computer first checks the L1 cache for the desired memory. If the data is there, it accesses it and is done. It only checks the L2 cache if the data is not found in the L1 cache. Likewise, the computer cheecks the L3 cache if the desired data is not found in the L2 cache, and finally it on only checks main memory if the data is not found in the L3 cache.

Imagine a computer system with the following cache access times:

L1 cache: 3 processor cycles L2 cache: 10 processor cycles L3 cache: 25 processor cycles

Main memory: 100 processor cycles

So, in the best case, the desired data would be immediately found in the L1 cache, which requires only 3 cycles to check. Conversely, in the worst case, the desired data would only be in main memory, which would require 138 cycles to access (3 cycles to check L1 cache + 10 cycles to check L2 + 25 cycles to check L3 + 100 cycles to access main memory). What is important, however, is the average amount of time it takes to get the desired data.

Imagine an application running on this system, whose data set exhibits the following average properties:

when accessing the L1 cache, 96% of the time the desired data is in the L1 cache (i.e. the L1 hit rate is 96%)

when accessing the L2 cache, 75% of the time the desired data is in the L2 cache (i.e. the L2 hit rate is 75%)

when accessing the L3 cache, 60% of the time the desired data is in the L3 cache (i.e. the L3 hit rate is 60%)

otherwise, the desired data is in main memory (i.e. main memory's hit rate is assumed to be 100%)

Lecture-wise Plan

Given the averages listed above, how long on average would the processor take to access the desired memory?

Module-4(Computer Organization)

- 1. Describe Instruction Set Architecture.
- 2. Represent Data in Computer Systems.

Lecture-wise Plan

Subject Name: Information Systems Analysis & Design

Year: 1st Year

Subject Code- BCA202

Semester: Second

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Module Number	Topics	Number of Lectures
	Overview of System analysis and design:	7L
1	1. Overview of System analysis and design.	1L
	2. Development life cycle- Waterfall, Spiral, incremental models, feasibility studies.	3L
	3. Requirements determination, Logical design, Physical design, Program design, Risk and feasibility analysis, prototyping.	3L
	Information requirement analysis:	7L
2	1. Process modelling with physical and	3L
	logical data flow diagrams.	-
	2. Data modelling with entity relationship diagrams.	2L
	3. Normalization up to 3NF.	3L
	System design:	14L
3	1. Process descriptions	2L
	2. Input/output controls	2L
	3. Object modelling	2L
	4. Database design	2L
	5. User Interface design	2L
	6. Documentation	2L
	7. Data Dictionary	2L
	Development methodologies:	4L
4	1. Top down, bottom up, structured chart	1L
T	2. Decision table, decision tree,	1L
	3. CASE productivity tools.	2L
	Testing:	5L
	1. Unit, integration testing	2L
5	2. System, Acceptance testing, decision tree.	3L
	Case studies:	4L
6	1. Test Case generation Case studies	4L
	Total	41L

Lecture-wise Plan

Assignment:

Module-1(Overview of System analysis and design):

- (i). What is system? Define subsystems and system boundary.
- (ii) Explain characteristics of a system.
- (iii). Explain abstract systems with example.
- (iv). Explain requirement of System Analysis.
- (v). Explain Decision Support Systems.

Module-2 (Information requirement analysis):

- (i)Draw the DFDs upto 3rd level for Online Admission System for a University.
- (ii) Draw ERD for Online Admission System for a University. Make necessary assumptions.

Module-3 (System design):

- (i) What are the uses of feasibility study?
- (ii) What is a primary key in terms of a database?
- (iii) What is a candidate key in terms of a database?
- (iv)What is a Alternate key in terms of a database?
- (v) What is Data Dictionary?

Module-4 (Development methodologies):

(i) Explain Top-down and bottom-up approach of prototype model.

Module-5 (Testing):

(i). Explain Black box testing with example.

Lecture-wise Plan

Subject Name: Computer Programming
Year: 1st Year

Subject Code-BCA203
Semester: Second

Year: I Y	ear Semester: S	econu
Module Number	Topics	Number of
	Introduction:	Lectures 3L
	1. Introductiontovisual Basic.	1L
1	1. Introductiontovisual Basic.	16
	2. Polymorphism,inheritance,class,objectsetc.	
		2L
	Creation of file:	2L
2	1. Creatingstandardexefile.	2L
	Introduction of tools:	8L
	1. Forms, ToolBar.	3L
	2. Text	5L
3	Box,label,combobox,listbox,timer,Picture,image,commandbu tton etc.	
	Introduction of code windows:	6L
	1. Basiceventbasedprogrammingoncontrols.	2L
4		
	2. Multiple formswithina project.	2L
	3. Saving formsand projects.	2L
	Database:	5L
5	1. Using datacontrol for database orientedapplication(Backend	JL
5	Ms- Access).	5L
	,	
	Arrays:	4L
6	1. Singledimensional.	2L
	2. Two dimensional	2L
	Dynamic searching& sorting:	4L
_	1. Linear andbinary.	2L
7	2. Sorting-bubble sort, selectionsort, insertionsort	2L
	Functionandsub-routine:	4L
	1. Defining afunction, referencing a function.	2L
8	2. Definingasubroutine,referencing asubroutine	2L
	String processing:	4L
	1. Stringfunction, concatenation, alphabetical sorting	4L
9	1. Samgranetion, concatenation, aiphabetical softing	4 L
	Datafiles:	2L

10	1. Sequential data file, random access files.	2L
	T	
	Total Number Of Hours = 42	

Faculty In-Charge

HOD, CSE Dept.

Assignment:

Α.

- 1. Write VB.NET code to declare a variable to store the age of a person.
- 2. Write VB.NET code to display the asterisk pattern as shown below:

***** ***** ***** ****

- 3. Write VB.NET code to declare two integer variables, one float variable, and one string variable and assign 10, 12.5, and "VB.NET programming" to them respectively.
- 4. Write VB.NET code to prompt a user to input his/her name and then the output will be shown as an example below.

B.

(CREATION OF BASIC FORMS WITH VB TOOLS LIKE TEXT BOX, COMMAND BUTTON)

- 1. Someone's basic salary is input through the keyboard. His dearness allowance is 40% of his basic salary, and house rent allowance is 20% of his basic salary. His Traveling Allowance is 10% of his basic salary. Write a program to calculate his gross salary. In the salary slip, employee's full name must be there. You have to input the full name of the employee.
- 2. The distance between two cities (in km.) is input through the keyboard. Write a program to convert and print this distance in meters, feet's, inches and centimeters.
- 3. If the marks obtained by a student in five different subjects are input through the keyboard, find out the aggregate marks and percentage marks obtained by the student. Assume the maximum marks that can be obtained by a student in each subject is 100. In the grade card you have to print the student's full name.
- 4. Temperature of a city in Fahrenheit degrees is input through the keyboard. Write a program to convert this temperature into centigrade degrees.

Lecture-wise Plan

- 5. The length & breath of a rectangle and radius of a circle are input through the keyboard. Write a program, to calculate the area & perimeter of the rectangle, and the area & circumference of the circle.
- 6. Two numbers are input through the keyboard into two locations C and D. Write a program to interchange the contents of C and D.
- 7. A five digit number is input through the keyboard. Write a program to reverse the number. Also calculate the sum of its digits.
- 8. The marks obtained by a student in 5 different subjects are input through the keyboard. The student gets a division as per the following rules: \bullet Percentage above or equal to 60 1 st division. \bullet Percentage between 50 and 59 2 nd division. \bullet Percentage between 40 and 49 3 rd division. \bullet Percentage les than 40 Fail.
- 9. A company insures its drivers in the following cases: If the driver is married.
- If the driver is unmarried, male & above 30 years of age. If the driver is unmarried, female & above 25 years of age.

Lecture-wise Plan

Subject Name: Mathematics
Year: 1st Year
Semester: Second

Year: 1 Year		Semester: Second
Module Number	Topics	Number of Lectures
	Differential Equation	7L
	Introduction of differential equation	1
1	Solving a linear differential equation with constant coefficients	3
	Linear differential equations with variable coefficients	3
	Vector space	10L
2	Vector space	4
2	Subspaces, bases and dimensions, co-ordinates	4
	linear transformation	2
	Sequences and Series	8L
3.	Bounded and unbounded sequences	1
3.	Monotones sequences, convergent sequences	1
	Cauchy's sequence	1
	Infinite series	2
	Alternating series, Leibnitz test	2
	Absolute convergence	1

Assignment:

Module-1:

1. Solve
$$(D^2 + D - 2)y = e^x$$

2. Solve
$$(D^2 - 4)y = x^4 + 3x^2 + x + 1$$

3. Find the c.f:
$$\frac{d^2y}{dx^2} + 4\frac{dy}{dx} + 5y = 0$$
, $y = 2$ and $\frac{dy}{dx} = \frac{d^2y}{dx^2}$ when $x = 0$.

4. Solve for
$$P.I: \frac{d^2y}{dx^2} - 6\frac{dy}{dx} + 9y = 6e^{3x} + 7e^{-2x} - \log 2$$
.

5.
$$\frac{d^2y}{dx^2} + \frac{dy}{dx} + y = \cos 2x$$
, find

- a. C.F.
- b. *P.I* .
- c. Compute solution

6. Find the complete solution of
$$\frac{d^2y}{dx^2} + 4\frac{dy}{dx} + 3y = x^2 + 3$$

7.
$$(D^2 - 8D + 15)y = 0$$
. Find $C.F$.

8. Give the order & degree of the differential equation
$$\frac{d^2y}{dx^2} + a^2x = 0$$
.

Module-2:

- 1. Let $V = R^3$. Let $\alpha_1 = (4,2,1)$, $\alpha_2 = (2,6,-5)$, $\alpha_3 = (1,-2,3)$. Is $\beta = \{\alpha_1,\alpha_2,\alpha_3\}$ a basis of
- 2. Given $T: \mathbb{R}^2 \to \mathbb{R}^2$ such that

$$T(a,b)=(a^2,b)$$

$$\alpha = (a_1, b_1)$$

$$\beta = (a_2, b_2) \in \mathbb{R}^2$$

check whether T is a Linear Transformation or not.

- 3. Given $T: \mathbb{R}^2 \to \mathbb{R}^2$ such that $T(x_1, x_2) = (x_1 + x_2, x_1 x_2)$ check whether T is a linear transformation or not.
- 4. Let $s = \{v_1, v_2, v_3, \dots, v_k\}$ be the basis for V. Then Prove that every vector in V can be written uniquely as a linear combination of vector in s.
- 5. Express v = (2, -5, 3) in \mathbb{R}^3 as a linear combination of the vectors $u_1 = (1, -3, 2)$, $u_2 = (2, -4, -1), u_3 = (1, -5, 7).$
- 6. Which of the following subsets of V are subspaces for V?

a.
$$\omega_1 = \{(x, y, z) : x + y = 0\}$$

b.
$$\omega_2 = \{(x, y, z) : x = 2y + 1\}$$
.

7. Let $V = \{(x,1) : x \in R\}$ for any $\alpha = (x,1), \beta = (y,1) \in V$ and $c \in R$, define $\alpha + \beta = (x + y, 1)$ $c.\alpha = (cx, 1)$

Verify that V is a vector space over R.

- 8. Define basis.
- 9. Define subspace of a vector space V.

Module-3:

- 1. Check whether the sequence $\{1, \frac{1}{3}, \frac{1}{3^2}, \frac{1}{3^3}, \dots, \frac{1}{3^n}, ...\}$ is a convergent sequence or not.
- 2. Define monotonic sequence.
- 3. Give the statement of Leibnitz's theorem.
- 4. Test the convergency of the series: $\frac{6}{1.3.5} + \frac{8}{3.5.7} + \frac{10}{5.7.9} + \cdots$ 5. Test the convergency of the series :-

a.
$$1 - \frac{1}{\sqrt{2}} + \frac{1}{\sqrt{3}} - \frac{1}{\sqrt{4}} + \dots$$

b.
$$\sum_{n=1}^{\infty} \frac{(-1)^n}{2n-1}$$

6. Test the series
$$a. \quad \sum_{n=1}^{\infty} \frac{\cos n\pi}{n^2+1}$$

b. Show that the series $\sum_{n=1}^{\infty} \frac{cosnx}{n^2}$ is absolutely convergent.

Subject Name: English Language & Technical Communication-I Subject Code-HU201
Year: 1st Year

Year: 1 Year		Semester: Second
Module Number	Topics	Number of Lectures
	ENGLISH LANGUAGE GRAMMAR	10L
1	Correction of Errors in Sentences Building Vocabulary Word formation Single Structures and Transformation	3
1	2. Word for a group of Words Fill in the blanks using correct Words Sentence	3
	3. Active &Passive Voice Direct &Indirect Narration (MCQ Practice during classes).	4
	READING COMPREHENSION	3L
2	Strategies for Reading Comprehension Practicing	1
	2. Technical & Non Technical Texts for Global/Local/Inferential/Referential comprehension; Précis Writing	2
	TECHNICAL COMMUNICATION	8L
3.	1. The Theory of Communication— Definition & Scope Barriers of Communication	4
	2. Different Communication Models EffectiveCommunication (Verbal/Nonverbal) Presentation/Public Speaking Skills (MCQ Practice during classes)	4
4	MASTERING TECHNICAL COMMUNICATION	6L
	Technical Report (formal drafting) Business Letter (formal drafting)	3
	2. Job Application (formal drafting) Organizational Communication (seepage3)	3
	GROUP DISCUSSION	4L
5	1. Principle & Practice	
		4
Total Number Of Hours = 31		

UNIVERSITY OF ENGINEERING AND MANAGEMENT, JAIPUR Lecture-wise Plan

Assignment:

Unit-1(ENGLISH LANGUAGE GRAMMAR):

1. Exercise of Active & Passive Voice Direct & Indirect Narration (MCQ Practice during classes).

Unit-2 (READING COMPREHENSION):

1. Précis Writing.

Unit-4(TECHNICAL COMMUNICATION):

1. Job Application practice

Title of Course: Programming Lab (Visual Basic)

Course Code: BCA293 L-T-P scheme: 0-0-3

L-T-P scheme: 0-0-3 Course Credit: 2

Objectives:

• Students will learn to evaluate engineering problems, formulate one or more solution techniques or algorithms, and code the solution using Microsoft Visual Basic for Applications (VBA) software and connect database with Microsoft Access.

Professionalism in completing and presenting laboratory exercises is emphasized.

Learning Outcomes: Student learns about Visual Basic's Integrated Development Environment (IDE).

- Student write Visual Basic programs using object-oriented programming techniques including classes, objects, methods, instance variables, composition, and inheritance, and polymorphism.
- Understand windows applications using forms, controls, and events.
- Understand design, create, build, and debug Visual Basic applications.
- Understand database design, connectivity with backend tool.
- Create one and two dimensional arrays for sorting, calculating, and displaying of data.
- Write and apply procedures, sub-procedures, and functions to create manageable code.
- Write and apply decision structures for determining different operations.
- Analyze a given problem and implement an algorithm to solve the problem.
- Improve upon a solution to a problem.
- Implement the Visual Basic language constructs in the right way.
- Design, develop and test Applications written in Visual Basic.

Course Contents:

List of Experiments:

Exercises that must be done in this course are listed below:

- 1. Introduction to Visual Basic & difference with BASIC. Concept about form Project, Application, Tools, Toolbox,
- i. Controls & Properties. Idea about Labels, Buttons, Text Boxes.
- ii. Data basics, Different type variables & their use in VB,
- iii. Sub-functions & Procedure details, Input box () & Msgbox ().
- iv. Making decisions, looping
- v. List boxes & Data lists, List Box control, Combo Boxes, data Arrays.
- vi. Frames, buttons, check boxes, timer control,
- vii. Programming with data, ODBC data base connectivity.
- viii. Data forms Wizard, query, and menus in VB Applications,
- ix. Graphics.

Minor project:

- 2. Case studies using any of the following items including relevant form design with the help of visual programming aids.
- a) Payroll accounting system.
- b) Library circulation management system.
- c) Inventory control system.
- d) University examination & grading system.
- e) Patient information system.
- f) Tourist information system.
- g) Judiciary information system.
- h) Flight reservation system.
- i) Pookshop automation softwar

Text Book:

- 1. Greg Perry, Snajaya Hettihewa, "SAMS Teach Yourself Visual Basic 6 in 24 Hours", Pearson Education.
- 2. Tim Anderson, "Visual Basic 6 in Easy Steps", Dreamtech Press.

Recommended Systems/Software Requirements:

- 1. Intel based desktop PC with minimum of 166 MHZ or faster processor with at least 64 MB RAM and 100 MB free disk space.
- 2. Turbo C or TC3 complier in Windows XP or Linux Operating System.

Experiment No: 1 (Forms)

Aim: Creation of basic forms with VB tools like text box, command button.

Description:

- 1. If cost price and selling price of an item is input through the keyboard, write a program to determine whether the seller has made profit or incurred loss. Also determine how much profit he made or loss incurred.
- 2. A number is input through the keyboard. Write a program to find out whether it is odd or even, +ve or -ve.
- 3. Write a program to check whether a year is leap or not.
- 4. Any character is entered through the keyboard. Write a program to determine whether the character entered is a capital letter, a small case letter, a digit or a special symbol. The following table shows the ranges of ASCII values for various characters. Characters ASCII values A-Z 65 90 a z 97 122 0 9 48 57 Special symbols 0 47, 58 64, 91 96, 123 127
- 5. Calculate the median of the 3 numbers.
- 6. Write a program to generate the factorial of a given integer.
- 7. Write a program to generate a Fibonacci series up to nth term.
- 8. Write a program to generate all the Armstrong numbers.
- 9. Write a program to print all prime numbers between a given ranges.
- 10. Calculate the roots of the quadratic equation of the form: $ax^2 + bx + c$.
- 11. A certain grade of steel is graded according to the following conditions:
- Hardness must be greater than 50
- Carbon content must be less than 0.7
- Tensile strength must be greater than 5600. The grades are as follows:
- Grade is 10 if all three conditions are met.
- Grade is 9 if conditions (i) and (ii) are met.
- Grade is 8 if conditions (ii) and (iii) are met.
- Grade is 7 if conditions (i) and (iii) are met.
- Grade is 6 if one condition is met.
- Grade is 5 if none of the conditions are met.

Write a program, which will require the user to give values of hardness, carbon content and tensile strength of the steel under consideration and output the grade of the steel

Experiment No. 2

Description:

- 1. Create a form with a command button named as: "CAPTION1". Write a program to change this caption as: "CLICK ME" with bold font.
- 2. Write a program to demonstrate the idea of the message box function. Also describe the various attributes of message box function with suitable code snippet.
- 3. Write a program to demonstrate the idea of the input box function. Input a character through input box function and determine whether it is vowel, consonant or special character.
- 4. Write a program to show the implementation of the timer control in a form. Create a VB form with a splash screen. The screen will be displayed before the vb forms. The duration of display is 5 milliseconds.
- 5. Write a program to demonstrate the concept of the image box and the picture box. Display an image with image box and picture box both. Determine the difference between these two.
- 6. Write a program to demonstrate the idea of the checkbox control. Input some string with a text box. Put three check boxes captioned as: a. block letter, b. small letter, c. normal case. On the form. The string case will be changed after clicking the appropriate checkbox.
- 7. Write a program to demonstrate the concept of the option button control. Input some string with a text box. Put two check boxes captioned as: a. bold font, b. normal font. On the form. The string font will be changed either in bold or in normal after clicking the option button.
- 8. Create a combo box with 3 values. These values are input through an input box function. Delete the first element of the combo box.
- 9. Write a program to demonstrate the idea of the list box. Create a list with the followings: a. GOOD MORNING. b. GOOD AFTERNOON. c. GOOD NIGHT. When you will click the each item of this list box, the appropriate picture will be displayed on a form.
- 10. Draw a rectangle shape with shape tool. Create 6 option buttons as follows: -
- o RECTANGLE.
- o SQUARE.
- o OVAL.
- o CIRCLE.
- o ROUNDED SQURE.
- o ROUNDED RECTANGLE.

Write a program to change the shape after clicking each option button. For every shapes, the fill color,

Border color, fill style must be changed.

Draw a line with line tool. Change the position of the line, border color, border width visibility style of that line with suitable code

Experiment No: 3

Aim: creation of basic forms with vb controls

Description:

- 1. Create a form with a progress bar. When the progress bar will be completed the second form will be opened and the 1st form will be hidden. In the new form, an image will be displayed.
- 2. Implement the drive list box, dir list box and file list box control in a VB form. For every change in the name of the drives, the name of the directories must be changed. And by selecting every directory, the list of files must be viewed in the file list box. When you click on the each and every file in the file list box, the file name will be displayed through a message box with the information style. Write this program with suitable VB code snippet.

- 3. Create a vb menu. The menu will contain two main menus: FILE AND HELP. Under the FILE menu these will be situated: NEW, OPEN, SAVE, SAVE AS, PRINT, EXIT. Under the HELP menu there will be a sub menu named as ABOUT US. Every option must have a short cut key with a suitable letter. Every submenu must be clickable. When you click the NEW, a new form will be created with a label: "THIS IS NEW FORM". When you click OPEN, a dialog box will be opened and select an image file from that dialog box and display that image in a picture box on your default form. When you will click the SAVE & SAVE AS, suitable message box will be opened. When you will click the PRINT option, you will be able to change the background color of a form with a system palette. After clicking EXIT, the application will be closed. After clicking on ABOUT US a message box will be displayed with your details in a new line.
- 4. Create multiple document interfaces with VB.
- 5. Create a signaling system with TIMER.
- 6. Display the SINGLE LINE INPUT of a file with a suitable VB application.
- 7. Display all records of a file with a VB application.
- 8. Insert a record in a file. After the insert, the file will contain only the new record.
- 9. Insert some in a file. The new records are inserted after some previous data.
- 10. Create a vb form. The form will contain three text boxes captioned with NAME, DEPARTMENT, ROLL, and MOBILE NO. Insert the desired value to every text boxes and select the desired file where you will save these values.

UNIVERSITY OF ENGINEERING & MANAGEMENT, JAIPUR Course Description

Title of Course: Business Presentation & Languages Lab

Course Code: HU291 L-T-P Scheme: 0-0-3

L-T-P Scheme: 0-0-3 Course Credits: 2

Introduction:

This course teaches the students on the basic English communication within a workplace. It talks about the varied ways of communication in forms of Verbal, nonverbal and written.

- Business communication
- Verbal. Non-verbal Communication
- Written Communication
- Barriers of Communication
- How to overcome barriers of communication
- Report writing
- Internal communication
- External communication

Objectives:

The objective includes teaching students in the different forms of verbal and non-verbal communication and how to overcome barriers. This module further teaches how to carry on with different forms of internal and external communication within a workplace.

Learning Outcomes:

Knowledge:

- 1. Understand the theory and logic behind the forms of communication.
- 2. Analyzing the factors responsible for poor communication
- 3. Communication channels and how they help to improve
- 4. Become more efficient in terms of workplace communication
- 5. Handling different forms of written communication
- 6. Learn to use tools properly to execute work at workplace.
- 7. Reports, Memos and MOMs with their proper utilization.

Course Contents:

Unit 1Verbal Communication - Target group profile, Barriers of Communication, Listening, Feedback

Presentation Skills, Use of Aids, Public Speaking, Practice Presentation, Non Verbal Communication

Written Communication – Stages of Writing, Composing Business Messages, Preparing Notes, Style, Punctuation, Using simple words, Proof Reading

Report Writing – Report Planning, Types of Reports, Developing an outline, Nature of Headings, Ordering of Points, Logical Sequencing, Graphs, Charts, Executive Summary, List of Illustration

Unit 2Internal Communication - Circulars, Notices, Memos, Agenda and Minutes

External Communication – Resume/CV, Using Facsimiles (Fax), Electronic Main, Handling Mail **Writing Business Letters** – Formats, Styles Types – Request, Enquiry, Placing Order, Instruction,

Action, Complaint, Adjustment, Sales, Reference, Good News & Bad News, Acknowledgement