

**SWAMI RAMANAND TEERTH MARATHWADA UNIVERSITY,
NANDED.**

**Draft Syllabus of B.C.A. (Bachelor of Computer Applications)
B.C.A. FIRST YEAR**

CODE No.	SUBJECT TITLE	TEACHING PERIODS / WEEK		MAXIMUM MARKS		TOTAL MARKS (A+B)	DURATION OF EXAM Hours
		Theory	Practical	Theory / Practical (A)	Internal Test Marks (B)		
SEMESTER 1:							
BCA.S1.1	Communication skills I	4	---	80	20	100	3
BCA.S1.2	Fundamentals of computers	4	---	80	20	100	3
BCA.S1.3	Office Automation	4	---	80	20	100	3
BCA.S1.4	Dos and Windows Operating Systems	4	---	80	20	100	3
BCA.S1.PR1	Comp.lab.1 (Dos+ Windows)	---	3	50	---	50	3
BCA.S1.PR2	Comp. Lab. 2 (MS-Office 2000)	---	3	50	---	50	3
TOTAL MARKS						500	
SEMESTER 2:							
BCA.S2.5	Communication skills II	4	---	80	20	100	3
BCA.S2.6	Programming in "C"	4	---	80	20	100	3
BCA.S2.7	Statistical Methods	4	---	80	20	100	3
BCA.S2.8	DBMS Concepts and Programming in FoxPro	4	---	80	20	100	3
BCA.S2.PR3	Comp.Lab.3 (Programming in "C")	---	3	50	---	50	3
BCA.S2.PR4	Comp.Lab.4 (Programming in FoxPro)	---	3	50	---	50	3
TOTAL MARKS						500	
TOTAL MARKS (SEMESTER 1 + SEMESTER 2)						1000	

BCA.S1.1 COMMUNICATION SKILLS - I

(80 Marks)

(Total 50 Lectures)

The Course Contains:

Unit I: Language and communication

Definition of Language, nature of language

Characteristics of Human Language

Varieties of English Language: British, American, Indian, Australian etc.

English for specific and special purposes.

Communication:

Importance of communication;

Animal and human communication;

Methods of communication (Verbal & Non-Verbal);

Barriers of communication.

Unit II: Oral Communication

Basic skills of communication

Listening to and Understanding-

a) Extended natural speech in business situations

Both face to face and on the telephone.

b) Understanding standard American, British and Indian accents.

Speaking with correct Pronunciation-

a) English Consonants

b) English Vowels

Speaking with right accent

Unit III: Presentation Skills

1) Planning and preparing to speak

2) Strategies for making powerful openings in presentations.

3) Body Language

4) Voice Modulations

Unit IV: a) Meetings

b) Group discussions

c) Seminars

d) Conference

e) Interviews

Suggested Reading:

1) DEVELOPING COMMUNICATION SKILLS

Krishna Mohan and Meera Bajaj

2) THE STERILING BOOK OF COMMON ERRORS IN ENGLISH

Gratian Vass

- 3) SPOKEN ENGLISH FOR YOU.
R.Radha Krishna Pillai and K Rajeevan
- 4) INDIAN AND BRITISH ENGLISH- A HAND BOOK OF USAGE
AND PRONUNCIATION.
Paroo Nihlani, Ray Tongue and Priya Hosali
- 5) A COURSE IN PHONETICS AND SPOKEN ENGLISH
Sethi and Dhamija.
- 6) ENGLISH PRONUNCING DICTIONARY.
Daniel Jones.
- 7) MACMILLAN'S FOUNDATION ENGLISH.
R. K. Dwivedi and A. Kumar

BCA.S1.2 – FUNDAMENTALS OF COMPUTERS

(80 Marks)

(50 Lectures)

1. Computer System Characteristics And Capability:

Basic structure, ALU, memory, CPU, I/O devices.

Development of computers.

Classification of computers:

(Micro, mini frame, super computer, pc, server, workstations)

2. Data Representation With in Computer:

BIT, BYTE, WORD

ASCII, EBCDIC, BCD Code

Introduction to Number system: Binary, Octal, Decimal and Hexadecimal.

Conversation from one number system to another number system.

Introduction to Basic Gates.

3. Input Devices:

Keyboard

Direct Entry: Card readers, scanning devices (BAR CODE, OMR, MICR),

Voice input devices, Light pen, Mouse, Touch Screen, Digitizer, Scanner.

4. Output Devices:

Printers: Impact and Non-impact printers.

CRT, LCD, CD-WRITER, ZIP DRIVE, DVD

Introduction to Web Camera, modem

5. Memory:

RAM, ROM, PROM, EPROM, EEPROM

Base memory, extended memory, expanded memory, Cache memory

Storage devices Tape, FDD, HDD, CDROM, Pen Drive.

6. Algorithm & Flowcharts:

Definition and properties

Principles of flowcharting

Flowcharting symbols

Converting algorithms to flowcharts.

7. Introduction To Programming Environment

History of languages, high-level, Low level, Assembly languages etc.

Compilers, Interpreters, Assemblers, Linkers, Loaders.

8. Microcomputers

What is Microprocessor, Introduction to Family of microprocessor, Ideal microcomputer, An Actual microcomputer, Memory system for microcomputer, Minimum microcomputer configuration.

9. Voice and Data communication

Types of communications, Physical communication, Public Switched Telephone Network, Cellular communication system.

Reference Books:

1. FUNDAMENTALS OF COMPUTERS BY V. RAJARAMAN.
2. COMPUTERS AND COMMONSENSE BY R. HUNT AND SHELL Y.
3. FUNDAMENTALS OF COMPUTER Systems. Low Price Edition.
4. Microprocessor B.Ram.

BCA.S1.3 – OFFICE AUTOMATION

(80 Marks)

(50 Lectures)

1. Introduction to Ms-Word:

Starting Word

Typing and Saving your Masterpiece, printing

Title Bar, Toolbars, The Ruler, Insertion point, Scroll Bars, The Menu bar,
The status bar.

Dialog Boxes: Command buttons, check boxes, drop-down lists, tabs, radio
buttons, Increment buttons.

Wizards and Templates.

2. Basic Text Editing:

Moving around in a document

Adding Text

Cut, Copy, Paste, Undo, Redo, Delete

3. Formatting:

Character formatting

Font dialog box

paragraph Formatting

Keeping text together

Adding borders and shading

Using tabs, page and section formatting, setting page margins, numbering pages.

4. Searching and Proofreading Tools:

Find and replace

Searching for special character

Proofreading tools

Choosing custom dictionary

Checking Grammar

Choosing a writing style

Using the Thesaurus

5. Working with Tables and Columns:

Anatomy of a Table, creating a table, entering text in a table.

Using table tools

Changing columns widths with Auto fit, Gridlines.

Merging Cells

Formatting

Sorting tables, copying tables, deleting tables.

Printing of Documents

Mail merge.

6. Introduction to Ms-Excel:

Spreadsheet overview, Excel highlights, starting excel, creating spreadsheet excel
menu

7. Working with Formulas and Functions

Introduction

Using basic formulas, advance formulas, designing formulas.

Using basic and advance functions

8. Formatting:

Types of formatting

Using borders, color and patterns

Conditional format

9 Creating and Formatting Charts:

Introduction to charts.

Creating charts, formatting charts, exploring charts.

10. Introduction to Power point.

Reference Books:

1. TEACH YOURSELF OFFICE 97/2000 FOR WINDOWS BY COREY SANDLER, TAM BADGETT, JAN WEINGARTEN (BPB)
2. MICROSOFT OFFICE 2000 BY COMPLETE (BPB)
3. MASTERING WORD 2000 BY MANSFIELD (BPB)
4. ESSENTIAL MS-WORD 2000 B MARMEL (BPB)
5. TEACH YOURSELF MS-EXCEL 2000 IN 24 HOURS (BPB)
6. TEACH YOURSELF MS-EXCEL 2000 PROGRAMMING IN 21 DAYS (BPB)

BCA.S1.4 – DOS AND WINDOWS OPERATING SYSTEMS.

(80 Marks)

(50 Lectures)

1. Disk Operating System:

What is DOS, History.
Files and Directory
Study of all internal & External commands.
Types of files.
Configuration of DOS (config. sys)
Batch file concept & study of Autoexec.bat file.
Booting Procedure of DOS

2. Introduction To Windows Operating System:

What are Windows O.S., History, files and Folders?
Architecture of windows O.S., Study of windows directories.
Basics of windows: Desktop, My computer, Recycle bin, my network places, Quick launch tool bar.

3. Windows Explorer

Opening windows explorer
Copying, pasting, moving, deleting, send to files
Controlling and customizing the toolbars
Using address bar, history list
Working with files and folders

4. Features of MS-WINDOWS

GUI, Multitasking, multi-user, network etc.
Important files of windows and their locations (For e.g. DLL, INI etc.)

5. Windows Accessory

Calculator
Character map
Notepad, WordPad
Paint
System tools and minor troubleshooting using different .ini files, Windows registry files.

6. Using Local Networks

What is network, E-mail?
Finding computers and files on network
Sharing and managing files, folders and printers
Adding and sharing Internet connection

7. Installation of Windows

Reference Books:-

- 1) MS-Dos 6.22- Russell A Stultz (BPB Publication)
- 2) Teach yourself Windows 2000 – Brain Underdahl .
- 3) Peter Norton's Maximizing Windows (Teachmedia)
- 4) Advanced MS-Dos Programming – Ray Duncan (BPB)

BCA.S1.PR1- COMPUTER LABORATORY – 1

(50 Marks)

PRACTICAL BASED ON DOS & WINDOWS

1. Booting procedure of DOS.
2. Study of various internal and external commands of DOS.
- 2 Study of various batch file commands and creation of batch file used in autoexec.
- 4 Study of redirection and piping concept.
- 5 Study of Windows O.S.
- 6 Study of components and accessories of Windows O.S.
- 7 Study windows Directories, different .ini files & their locations.

BCA.S1.PR2-COMPUTER LABORATORY-2

(50 Marks)

PRATICAL BASED ON MS-OFFICE 2000

1. At least 15 Practical based on syllabus mentioned in paper no. BCA.S1.3.

BCA.S2.5 – COMMUNICATION SKILLS - II

(80 Marks)

(TOTAL LECTURES-50)

Unit I: Reading

- a) Reading and understanding business letters, Reports and memos.
- b) Reading and understanding scientific texts.
- c) Reading a dictionary, thesaurus, and encyclopedia.
- d) Reading passages and poems.

Unit II: Writing

- a) Letters- Formal and Informal
- b) Note taking and note making
- c) Reports
- d) Curriculum Vitae
- e) Making advertisements for newspapers
- f) Rearranging the jumbled sentences.

Unit III: Use of Grammar and usage reference sources.

- a) Morphology: Word formation processes
- b) Word classes
- c) Phrase, Clause and Sentence
- d) Punctuation and Capitalization.
- e) Common errors in the use of English.

Unit IV: Situational and functional English

Suggested Reading:

- 1) PRACTICAL ENGLISH GRAMMAR
Thomson and Martinet
- 2) LIVING ENGLISH STRUCTURE
W. S. Allen
- 3) UNIVERSITY ENGLISH GRAMMAR
Quirk et al
- 4) MODERN ENGLISH GRAMMAR (AN INTRODUCTION)
L. S. Deshpande & P.H. Dharamsi
- 5) ENGLISH FOR PRACTICAL PURPOSES
Z.N.Patil, B.S.Walke,A.thorat,Z.Merchant
- 6) BUSINESS COMMUNICATION
Urmila Rai & S.M. Rai

BCA.S2.6 – PROGRAMMING IN ‘C’

(80 Marks)

(Total Lecturers – 50)

1. Introduction To C:

- 1.1 The character Set, Constants, Variables and Keywords, Types of constants, Types of variables, keywords, data types.
- 1.2 Instructions: Type Declaration Instruction, Arithmetic Instruction

2. Data Input and Output:

- 2.1 Getchar (), putchar (), printf (), scanf (), puts (), gets (),

3. The Decision Control Structure:

- 3.1 The if Statement
- 3.2 The if-else Statement
- 3.3 Use of logical operators

4. The Loop Control Structure:

- 4.1 The while loop, the for Loop
- 4.2 The break, continue, go to statement
- 4.3 The case control structure: Decisions using switch

5. Arrays:

- 5.1 What are Arrays?
- 5.2 Arrays Initialization
- 5.3 Bounds Checking
- 5.4 Types of Array
- 5.5 Initializing a 2- Dimensional & Multidimensional Arrays

6. Storage Classes:

- 6.1 Automatic, Register, Static, External (Local and Global)
- 6.2 Scope rules

7. Functions:

- 7.1 Arguments and local variables, Returning Function results, Default return type and Type void, passing values between functions, Declaration of function type.
- 7.2 Recursion
- 7.3 Function with variable arguments

8. Character Strings:

- 8.1 What are Strings?
- 8.2 Standard library String Functions: strlen (), strcpy (), strcat (.), strcmp().

9. Pointers:

- 9.1 Introduction to Pointers
- 9.2 Operations on Pointers

9.3 Pointers and Functions

9.4 Pointers and Arrays.

10. Structures And Unions:

10.1 Declaring structure, Initializing structures, structure variables, accessing structure Elements.

10.2 Arrays of structures

10.3 Structures within structures

10.4 Introduction to Union.

11. File Input/Output:

11.1 Introduction, defining and opening a file

11.2 Study of file I/O Operations: fopen (), fclose(), fputs (), fgets (), fread (), fwrite(),
Command line arguments

Reference Books:

1. LET US C BY YASHWANT KANETKAR – BPB PUBLICATIONS
2. PROGRAMMING IN ANSI C BY E. BALGURUSAMY – TATA MCGRAW HILL
3. TURBO C/C++: THE COMPLETE REFERENCE BY H. SCHILDIT
4. PROGRAMMING WITH “BY BYRON GOVTFRED SCEOND EDITION TATA MCGRAW HILL.

BCA.S2.7- STATISTICAL METHODS
(80 Marks) (Total Lecturers-50)

1. INTRODUCTION:

- 1.1 Definition: Webster's and Sacristy's definitions of statistics.
Importance of statistics. History: Advantages and limitations.
Scope of statistics: industry. Economy, Computer Science, Social Science etc.,
Collection of Data.

2. DATA CONDENSATION AND GRAPHICAL METHODS:

- 2.1 Raw data, Attributes and Variables, Discrete and Continuous variables.
2.2 Construction of frequency distribution and cumulative frequency.
2.3 Graphical representation of frequency distribution: Histogram, frequency polygon
2.4 Diagrammatic representation: Simple bar, Subdivided bar, pie diagram.

3. MEASURES OF CENTRAL TENDENCY:

- 3.1. Concept of central tendency.
3.2. Arithmetic mean: Definition for ungrouped and grouped data, merits and demerits.
3.3 Median: Definition formula and computation for ungrouped and grouped data, merits and demerits.
3.4 Mode: Definition, formula and computing for ungrouped and grouped data merits and demerits.

4. MEASURES OF DISPERSION:

- 4.1 Concept of dispersion and measures of dispersion.
4.2 Range: definition for ungrouped and grouped data.
4.3 Standard deviation: Definition for ungrouped and grouped data, Mean Deviation.
4.4 Variance: Definition for grouped and ungrouped data,
4.5 Numerical problems.

5. PROBABILITY:

- 5.1 Permutation of n dissimilar objects taken r at a time (without repetitions)
5.2 Combination of r objects taken from n objects.
5.3 Sample space (finite, countably infinite).
5.5 Events: types of events.

5.6 Probability: Classical definition.

5.7 Axioms of Probability.

5.8 Theorems on Probability

i) $0 \leq P(A) \leq 1$

ii) $P(A) + P(A^c) = 1$

6. Correlations and Regression

6.1 Definition of correlation and regression, Karl Pearson's formula for ungrouped data of Correlation.

7. Analysis of Time series:

7.1 Component of time series, measure of trends, moving average and least square.

REFERENE BOOKS:

1. Fundamentals of Statistics by Goor, Gupta, Das Gupta.
2. Statistical Methods by S.P. Gupta
3. Business Statistics by S. Shaha
4. Modern Elementary Statistics by J.E. Freund
5. Fundamental of statistics by S.C. Gupta.
6. Fundamentals of applied statistics by Gupta and Kapoor.

BCA.S2.8 – DBMS CONCEPTS AND PROGRAMMING IN FOXPRO

(80 Marks)

(TOTAL LECTURERS-50)

1. Introduction

What is Data, information, and database. Manual vs. computerized database, what is DBMS?

Architecture of DBMS, User of DBMS, Database Administration, DBMS facilities,
Advantages and disadvantages of DBMS, Data Models.

2. Introduction To Database & FoxPro:

What is Simple and Relational Database, Advantages of using FOXPRO.

3. Creating Database Structure:

Defining structures of database file
Entering field names
Saving a database file
Copying and modifying structures of database files.
Searching for specified records

4. Adding Editing And Viewing Data:

Appending data
Changing or editing data
Resizing or changing the order of fields
Editing multiple records, portioning the window
Replacing field contents
Deleting Records
Moving the record Pointer

5. Modify Structure, & File Utilities:

Modifying structure of a database file
File Utilities in FoxPro

6. Sorting And Indexing Database Files

Sorting
Type of Indexes (Single, Compound, Structural Compound, Compact)
Indexing Command
Understanding Expressions
Selecting and Controlling Index Files
Finding information with FIND AND SEEK

7. Generating Reports:

Designing the report forms
Page Layout
Page Preview
Layout Tools
Tiles / Summary
Data Grouping

8. Memory Variables, Date & Time Functions

Memory variables

Array

Time & Date functions and commands

Date Arithmetic

9. Programming With Foxpro:

Introduction to foxpro programs.

Accept and Input.

Creating program files.

Looping statements

Editing a Program files

Making Decisions

10. Multiple Database File:

Concept

Opening multiple database files

Linking Database with SET RELATION

updating information

11. Windows, Menus and Popups

Define, Activate, Deactivate and Hide.

Reference Books: -

1. FOXPRO 2.5 MADE SIMPLE FOR DOS & WINDOWS BY R.K.TAXLI (BPB)
2. PROGRAMMING GUIDE TO FOXPRO 2.5 HOWARD DICKER, BPB PUBLICATIONS.
3. MASTERING FOXPRO 2.5 & 2.6 (SPECIAL EDN.) – BPB
4. PROGRAMMERS GUIDE TO FOXPRO 2.5/2.6 (W/D) - BPB
5. PROGRAMMERS GUIDE TO FOXPRO (THIRD EDITION) BY ABRAHAM SILBERSCHATZ, HENRY KORTH, S. SUDARSHAN (MCGRAW HILL)

BCA.S2.PR3 - COMPUTER LABORATORY – 3

(50 Marks)

1. At least 15 Practical based on syllabus mentioned in paper no. BCA.S2.6.

BCA.S2.PR4-COMPUTER LABORATORY-4

(50 Marks)

1. At least 15 Practical based on syllabus mentioned in paper no. BCA.S2.8.