

**BHAKTA KAVI NARSINH MEHTA UNIVERSITY,
JUNAGADH**



**Curriculum Framework for Post-Graduate Diploma Programme in
PGDCA**

As Per National Education Policy (NEP)-2020

ONE YEAR P.G. Diploma Programme

Semester- I

Effective June-2026

BHAKTA KAVI NARSINH MEHTA UNIVERSITY
Major/Minor
Syllabus of Post Graduate Diploma in Computer Application (PGDCA) as per NEP-2020
Faculty of Science
Effective from June 2026
Subject: Computer Science
SEMESTER- I

SUMMARY OF THE SYLLABUS

Sem No.	Sr. No.	Category of Course	Course Title	Course Code	Course Level	Credit	ESE Marks	CIA Marks	Total Marks	Exam Duration
Sem-1	1	DSC-1	Programming In C (Theory)	CDSC1	6.0	Theory – 04	70	30	100	02:30 Hrs
	2	DSC-2	Programming In C (Practical)	CDSC2	6.0	Practical – 04	100	00	100	03:00 Hrs
	3	DSC-3	Networking, Internet & Web Page Development (Theory)	NETDSC3	6.0	Theory – 04	70	30	100	02:30 Hrs
	4	DSC-4	Networking, Internet & Web Page Development (Practical)	NETDSC4	6.0	Practical – 04	100	00	100	03:00 Hrs
	5	DSC-5	Comp. Fundamentals & Emerging Tech. (Theory)	CFDSC5	6.5	Theory – 04	70	30	100	02:30 Hrs
	6	SEC-1	Office Automation Tools & Packages	OASEC1	6.0	Theory – 02	35	15	50	01:00Hrs

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Course Level	6.0	Internal Marks	30
Programme	P.G.D.C.A.	External Marks	70
Semester	1	Practical Internal	0
Category of Course	DSC-1	Practical External	0
Course Credit	4	Prac. External Exam Duration	-
Teaching Hours	Theory-60 Practical-0	Total	100
Course Code	CDSC1	Exam Duration	2:30 Hrs
Course Title	Programming In C (Theory)		

Objectives:

- Develop fundamental knowledge of C programming including its syntax, character set, tokens, data types, operators, type conversion, and preprocessor directives.
- Develop logical and problem-solving skills through algorithms, flowcharts, dry runs, and systematic programming techniques.
- Enable students to design and implement structured programs using decision-making, looping, and jumping statements in C.
- Familiarize students with library and user-defined functions and enable them to develop modular, reusable, and efficient programs using functions, recursion, and appropriate parameter-passing techniques.
- Develop proficiency in handling data using arrays, strings, structures, and unions, including their use with functions and nested data structures.
- Provide an understanding of pointers and memory management, enabling students to work with pointers to variables, arrays, structures, and dynamic memory allocation.
- Develop skills in file handling and input/output operations, including basic data-file processing and command-line arguments.
- Enable students to analyze, design, code, test, and debug C programs for solving practical computational problems.

Outcomes:

- Explain the fundamental concepts, syntax, data types, operators, and programming constructs of C.
- Analyze programming problems and develop appropriate algorithms, flowcharts, and logical solutions.
- Construct C programs using branching, looping, jumping statements, functions, and library functions.
- Develop programs using arrays, strings, structures, and unions for effective data organization and processing.

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- Apply pointers and dynamic memory allocation to solve programming problems involving direct memory manipulation.
- Implement basic file handling and command-line argument processing in C programs.
- Design, test, trace, debug, and evaluate C programs using systematic programming and problem-solving techniques.

Course Contents

UNIT		Hours
Unit 1	Introduction of C Language ▪ Introduction to Programming ▪ Various Computer Languages ▪ History & Overview of C Language ▪ Difference between traditional C and modern C ▪ C character set ▪ C tokens • Keywords • Constants • Strings • Identifiers and variables • Operators • All 8 operators & Hierarchy of operators • Data types in C • Type casting & Type Conversion • PRE-PROCESSORS IN C Introduction of Logic Development Tools • Introduction of Logic & Basic of Algorithm. • Basics of Flow Chart • Dry-run and its Use. • Other Logic development techniques (Algorithm and Flowchart Based on Programming)	12
Unit 2	Branching & Looping • Decision structure • If statements(All Types) • Switch statement • Conditional ternary operator	12

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	• Looping Structures • For loop • Do...while loop • While loop • Nesting of loops • Jumping statements • Break statement • Continue statement • Go to statements	
Unit 3	Library Functions • Introduction of Library Function • Brief View of Header Files(stdio.h, conio.h, math.h, string.h, stdlib.h, ctype.h, graphic.h, process.h, dos.h) • Types of library functions • String Function: strcpy, strncpy, strcat, strncat, strchr, strcmp, strncmp, strlen, strstr • Mathematical Functions: ceil, div, exp, fabs, floor, fmod, log, pow, sqrt • Date & Time Functions: clock, time, gmtime, localtime • Graphics Functions: initgraph, closegraph, arc, line, circle, ellipse, getx, putx, setcolor, setbkcolor • I/O Formatting Functions: printf, scanf, getc, getchar, gets, putc, putchar, puts • Miscellaneous Functions: delay, clrscr, isalnum, isalpha, isdigit, islower, isprint, isspace, isupper, toupper, tolower. • Standard Library functions: abs, atof, atol, exit, free, rand • Memory Allocation Functions: malloc, realloc, calloc, free User Define Functions (udf) ▪ Concept of User Define Function • Types of user defined functions • call by value & call by reference • Nesting & Recursion • Storage classes	12

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Unit 4	Array • Concept of Array • Types of arrays • Single dimensional array • Two dimensional array • Multi-dimensional array • String arrays • Array with functions using UDF • Use of Arrays in Programming Structures • Concept of Structure • Initializations and declarations • Array with structures • Array of Structure • Array Within Structure • Udf with structures • Nested structures • Introduction to union • Difference between Structure & Union	12
Unit 5	Pointers • Concept of Pointers • Pointer to Variables • Pointer to Array • Pointer within Array • Pointer To Structure • Pointers within structure • Pointer to Pointer • Use of pointers in Dynamic Programming File Handling ○ Concept of data files ○ Importance of file handling ○ I/O Operation ○ Command line arguments	12

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References Book:

- 1 Programming in ANSI C E. Balaguruswami
- 2 Let Us C Yashwant Kanetkar.
- 3 Working with C Yashwant Kanetkar.
- 4 Programming in C Schaum Series publication.

Web site References:

- <https://www.tutorialspoint.com/cprogramming/index.htm>
- <http://www.eskimo.com/~scs/cclass/notes/top.html>
- <http://c-faq.com/>
- <http://www.learn-c.org/>
- https://www.tutorialspoint.com/cprogramming/cprogramming_tutorial.pdf
- <https://www.w3schools.in/c-tutorial/>
- <https://www.javatpoint.com/c-programming-language-tutorial>

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Course Level	6.0		InternalMarks	00
Programme	P.G.D.C.A.		ExternalMarks	00
Semester	1		PracticalInternal	00
Categoryof Course	DSC-2		PracticalExternal	100
CourseCredit	4		Prac.ExternalExam Duration	3:00 Hrs
TeachingHours	Theory-0 Practical-120		Total	100
CourseCode	CDSC2		ExamDuration	-
Course Title	Programming in C(Practical)			

Objectives:

- To develop basic programming skill
- To develop skill to implement logical aspects into practice
- To understand the code organization and functional decomposition of problem statement
- To gain understanding on memory management and file concept.

Outcomes:

- Ability to define and manage data structures based on problem subject domain.
- Ability to work with textual information, characters and strings.
- Ability to work with arrays of complex objects.
- Understanding a concept of object thinking within the framework of functional model.
- Understanding a concept of functional hierarchical code organization.
- Understanding a defensive programming concept. Ability to handle possible errors during program
- Learn program formation and execution.

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Unit 2	Branching & Looping • Decision structure • If statements(All Types) • Switch statement • Conditional ternary operator • Looping Structures • For loop • Do...while loop • While loop • Nesting of loops	24

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	• Jumping statements • Break statement • Continue statement • Go to statements	
Unit 3	Library Functions • Introduction of Library Function • Brief View of Header Files(stdio.h, conio.h, math.h, string.h, stdlib.h, ctype.h, graphic.h, process.h, dos.h) • Types of library functions • String Function: strcpy, strncpy, strcat, strncat, strchr, strcmp, strncmp, strlen, strstr • Mathematical Functions: ceil, div, exp, fabs, floor, fmod, log, pow, sqrt • Date & Time Functions: clock, time, gmtime, localtime • Graphics Functions: initgraph, closegraph, arc, line, circle, ellipse, getx, putx, setcolor, setbkcolor • I/O Formatting Functions: printf, scanf, getc, getchar, gets, putc, putchar, puts • Miscellaneous Functions: delay, clrscr, isalnum, isalpha, isdigit, islower, isprint, isspace, isupper, toupper, tolower. • Standard Library functions: abs, atof, atol, exit, free, rand • Memory Allocation Functions: malloc, realloc, calloc, free User Define Functions (udf) ▪ Concept of User Define Function • Types of user defined functions • call by value & call by reference • Nesting & Recursion • Storage classes	24
Unit 4	Array • Concept of Array • Types of arrays • Single dimensional array • Two dimensional array • Multi-dimensional array	24

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	• String arrays • Array with functions using UDF • Use of Arrays in Programming Structures • Concept of Structure • Initializations and declarations • Array with structures • Array of Structure • Array Within Structure • Udf with structures • Nested structures • Introduction to union • Difference between Structure & Union	
Unit 5	Pointers • Concept of Pointers • Pointer to Variables • Pointer to Array • Pointer within Array • Pointer To Structure • Pointers within structure • Pointer to Pointer • Use of pointers in Dynamic Programming File Handling ○ Concept of data files ○ Importance of file handling ○ I/O Operation ○ Command line arguments	24

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- 1 Programming in ANSI C E. Balaguruswami
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- <http://www.eskimo.com/~scs/cclass/notes/top.html>
- <http://c-faq.com/>
- <http://www.learn-c.org/>
- https://www.tutorialspoint.com/cprogramming/cprogramming_tutorial.pdf
- <https://www.w3schools.in/c-tutorial/>
- <https://www.javatpoint.com/c-programming-language-tutorial>

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CourseLevel	6.0	InternalMarks	30
Programme	P.G.D.C.A.	ExternalMarks	70
Semester	1	PracticalInternal	00
Categoryof Course	DSC-3	PracticalExternal	00
CourseCredit	4	Prac.ExternalExam Duration	-
TeachingHours	Theory- 60 Practical-00	Total	100
CourseCode	NETDSC3	ExamDuration	2:30 Hrs
CourseTitle	Networking, Internet & Web Page Development (Theory)		

Objectives:

- To gain insight into the usage of internet technology
- To give knowledge of Scripting languages like HTML, CSS and Java Script

Outcomes:

- Ability to create static and dynamic web pages using basic HTML
- Ability to create web pages with standardized designing elements
- Developing skill to create front end design of web page Apply Eloquent ORM and validation techniques to ensure efficient data handling and data integrity.

Course Contents

UNIT		Hours
Unit 1	Introduction to Computer Network • Basics of Computers • Computer Network • Type of Computer Network • Network Topology • OSI Reference Model (Introduction) • TCP/IP • Internet Terminology • ISP (Internet Service Provider) • Intranet • VSAT (very small aperture terminal)URL Final Keyword	12

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Unit 2	Application of Internet • World Wide Web (WWW) • Types of Search Engine • Remote Login • Electronic Mail (Email) • Concept and use of : E-Commerce, E-Business, E-Governance, Mobile Commerce • Website Basics (WebPages; Hyper Text Transfer, Domain name server, Protocol, File Transfer Protocol, Domain Names; URL , Protocol Address; Website[Static, Dynamic, Responsive], Web browser, Web Servers; Web Hosting, web portal, domain name server • Network Security Concepts: Cyber Law, Firewall, Cookies, Hackers and Crackers • Types of Payment System (Digital Cash, Electronic Cheque, Smart Card, Debit/Credit Card)	12
Unit 3	Basic of HTML & Advance HTML 5 • Fundamental of HTML • Basic Tag and Attribute • The Formatting Tags • The List Tags & Link Tag • inserting special characters, • adding images and Sound, • Table & Frame in HTML • Forms • HTML 5 Document Structure & Syntax (section, article, aside, header, footer, nav, dialog) - o Attributes of HTML 5 - o Web Form (datetime, date, month, week, time, number, range, email, url) • Audio / Video	12
Unit 4	Cascading Style Sheet & CSS 3 • Introduction to CSS • Types of Style Sheets • Class, ID Selector	12

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	• CSS Text & Font Properties • CSS Background Properties • CSS List Properties • CSS Margin & Padding Properties • CSS Comments • CSS 3 • Border Property • Background & Gradient Property • Drop Shadow Property • 2D & 3D Transform Property • Transition Property	
Unit 5	JavaScript • Introduction to JavaScript • Variables • JavaScript Operators • Conditional Statements • JavaScript Loops • JavaScript Break and Continue Statements • Dialog Boxes • JavaScript User Define Function Built in Function (string, Maths, Array, Date) • Events (onclick, ondblclick, onmouseover, onmouseout, onkeypress, onkeyup, onfocus, onblur, onload, onchange, onsubmit, onreset) • Form Validation & E-mail Validation	12

References Book:

- 1 HTML in 10 steps or less Laurie Ann Ulrich, Robert G. Fuller
- 2 Internet The Complete Reference Young.
- 3 World Wide Web Design with Html C Xavier.
- 4 Internet for Every One Leon.
- 5 Practical Html 4.0 Lee Philips.
- 6 MCSE Networking Essential Training Guides.

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Web site References:

- <https://www.javatpoint.com/html-tutorial>
- <https://www.tutorialspoint.com/html/index.htm>
- <https://www.w3schools.com/html/>
- <https://www.csstutorial.net/>

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CourseLevel	6.0	InternalMarks	00
Programme	P.G.D.C.A.	ExternalMarks	00
Semester	1	PracticalInternal	00
Categoryof Course	DSC--4	PracticalExternal	100
CourseCredit	4	Prac.ExternalExam Duration	-
TeachingHours	Theory- 00 Practical - 120	Total	100
CourseCode	NETDSC4	ExamDuration	3:00 Hrs
CourseTitle	Networking, Internet & Web Page Development (Practical)		

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UNIT		Hours
Unit 1	Introduction to Computer Network • Basics of Computers • Computer Network • Type of Computer Network • Network Topology • OSI Reference Model (Introduction) • TCP/IP • Internet Terminology • ISP (Internet Service Provider) • Intranet • VSAT (very small aperture terminal)URL Final Keyword	24

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Unit 2	Application of Internet • World Wide Web (WWW) • Types of Search Engine • Remote Login • Electronic Mail (Email) • Concept and use of : E-Commerce, E-Business, E-Governance, Mobile Commerce • Website Basics (WebPages; Hyper Text Transfer, Domain name server, Protocol, File Transfer Protocol, Domain Names; URL , Protocol Address; Website[Static, Dynamic, Responsive], Web browser, Web Servers; Web Hosting, web portal, domain name server • Network Security Concepts: Cyber Law, Firewall, Cookies, Hackers and Crackers • Types of Payment System (Digital Cash, Electronic Cheque, Smart Card, Debit/Credit Card)	24
Unit 3	Basic of HTML & Advance HTML 5 • Fundamental of HTML • Basic Tag and Attribute • The Formatting Tags • The List Tags & Link Tag • inserting special characters, • adding images and Sound, • Table & Frame in HTML • Forms • HTML 5 Document Structure & Syntax (section, article, aside, header, footer, nav, dialog) - o Attributes of HTML 5 - o Web Form (datetime, date, month, week, time, number, range, email, url) • Audio / Video	24
Unit 4	Cascading Style Sheet & CSS 3 • Introduction to CSS • Types of Style Sheets • Class, ID Selector	24

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	• CSS Text & Font Properties • CSS Background Properties • CSS List Properties • CSS Margin & Padding Properties • CSS Comments • CSS 3 • Border Property • Background & Gradient Property • Drop Shadow Property • 2D & 3D Transform Property • Transition Property	
Unit 5	JavaScript • Introduction to JavaScript • Variables • JavaScript Operators • Conditional Statements • JavaScript Loops • JavaScript Break and Continue Statements • Dialog Boxes • JavaScript User Define Function Built in Function (string, Maths, Array, Date) • Events (onclick, ondblclick, onmouseover, onmouseout, onkeypress, onkeyup, onfocus, onblur, onload, onchange, onsubmit, onreset) • Form Validation & E-mail Validation	24

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- 3 World Wide Web Design with Html C Xavier.
- 4 Internet for Every One Leon.
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- <https://www.w3schools.com/html/>
- <https://www.csstutorial.net/>

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Course Level	6.5	Internal Marks	30
Programme	P.G.D.C.A.	External Marks	70
Semester	1	Practical Internal	00
Category of Course	DSC-5	Practical External	00
Course Credit	4	Prac. External Exam Duration	-
Teaching Hours	Theory- 60 Practical-00	Total	100
CourseCode	CFDSC5	Exam Duration	2:30 Hrs
CourseTitle	Comp. Fundamentals & Emerging Tech.(Theory)		

Objectives:

- Develop fundamental knowledge of computers including their characteristics, data-processing cycle, generations, classifications, components, memory, processors, and peripheral devices.
- Familiarize students with computer hardware and peripherals, including motherboards, processors, memory, slots, ports, cables, input devices, output devices, and expansion cards.
- Develop an understanding of data-storage technologies and their mechanisms, including magnetic, optical, flash, removable, and cloud-based storage, along with basic storage performance parameters.
- Develop proficiency in number systems and computer codes by introducing binary, octal, decimal, and hexadecimal systems, number conversions, binary arithmetic, ASCII, BCD, EBCDIC, Unicode, and parity checking.
- Provide an understanding of computer languages, translators, operating systems, and software environments, including machine, assembly, and high-level languages and different types of operating systems.
- Familiarize students with modern communication technologies and devices, including mobile, wireless, Bluetooth, Wi-Fi, Li-Fi, GPS, and related communication systems.
- Create awareness of computer viruses and information security by introducing different types of viruses, their effects, preventive measures, and basic protection techniques.
- Introduce the fundamentals of cloud computing, including its characteristics, service models such as IaaS, PaaS, and SaaS, architecture, security, and privacy issues.
- Enable students to identify and select appropriate computer hardware, storage, communication, operating-system, and cloud technologies according to basic computing requirements.

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Outcomes:

- Explain the fundamental concepts of computers, their characteristics, generations, classifications, components, memory, processors, ports, slots, and peripheral devices.
- Identify, classify, and explain various input and output devices, including keyboards, scanners, monitors, printers, plotters, and emerging input/output technologies.
- Explain different data storage technologies and their working principles, including magnetic storage, optical storage, flash memory, removable storage, and cloud storage, along with basic storage performance parameters.
- Perform number-system conversions and binary arithmetic and explain commonly used computer codes such as ASCII, BCD, EBCDIC, and Unicode, including parity-based error detection.
- Describe different computer languages, language translators, operating systems, and software environments, and distinguish among machine language, assembly language, and high-level languages.
- Explain basic computer communication technologies and devices, including wireless communication technologies and modern communication methods.
- Describe the concept, types, history, effects, and preventive measures of computer viruses and demonstrate awareness of basic computer security practices.
- Explain the fundamentals of cloud computing, including its characteristics, service models (IaaS, PaaS, SaaS), architecture, security, and privacy considerations.
- Apply fundamental computer concepts to identify appropriate hardware, storage, communication, operating-system, and cloud technologies for basic computing requirements.

Course Contents

UNIT		Hours
Unit 1	Introduction of Computers • Basics of Computers ○ What is Computer? ○ Characteristics of Computer ○ Data Processing Cycle(Data → Process →information) • Classification of Computer by Data Processed ○ Analog, Digital and Hybrid Computers • History and Generations of Computers ○ First to Fifth Generation Computers • Classification of Computer by Processing Capabilities ○ Micro, Mini, Mainframe and Super Computers • Simple Model of Computer ○ Input Devices ○ CPU (Central Processing Unit) ○ Arithmetic & Logic Unit	12

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	- o Control Unit - o Internal Memory • Output Devices • Secondary Storage Devices Internal/External parts used with Computer Cabinet • Introduction to Mother board • Types of Processors . - o Dual Core, Core 2 Duo, i2, i3, etc ... • Memory structure and Types of Memory - o RAM (SRAM, DRAM, DDR.) - o ROM (ROM, PROM, EPROM, EEPROM,Cache) • Slots - o ISA Slots / PCI Slots / Memory Slots/SATA • Sockets • Cables - o Serial Cable / Parallel Cable / USB Cable/HDMI • Ports - o USB (2.0 &3.0)/ Serial / Parellel • Power Devices :UPS • Graphic Cards • Network card, Sound Card	
Unit 2	Input Devices • Introduction • Types of Input Devices - o Keyboard / Mouse / Trackball / Glide - Pad / Game Devices Joystick, etc.) / Light Pen / Touch Screen / Mic (Sound Input) / Camera (Photo and Video Input) / POS (Point of Sale) Terminal (Scanners, etc) - o MIDI(Musical Instrument Digital Interface) Keyboard, - o Wireless Devices (Keyboard, Mouse, etc) • Types of Scanners - o OMR, MICR, OBR Output Devices • Introduction • Types of Output Devices • Types of Monitors	12

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	○ CRT Display Units ○ LCD ○ LED ○ OLED ● Types of Printers ○ Impact (Dot Matrix Printer, Daisy Wheel Printer) ○ Non Impact(Ink Jet Printer, Laser Printer) ● Plotters ● Other Devices ○ Fascimile(FAX) ○ Headphone ○ SGD (Speech Generating Device) ○ COM (Computer Output Microfilm) ○ Google Glass	
Unit 3	Data Storage ● Introduction ● Types of Magnetic Storage Devices ○ Floppy Disk/ Hard Disk / Magnetic Tape / Magnetic Disks ● Storage Mechanism of Magnetic Storage Devices ○ Tracks / Sectors / Clusters / Cylinders ● Reading / Writing Data to and from Storage Devices ● Seek Time / Rotational Delay - Latency / Access ● Time /Response Time ● Other Storage Devices ○ USB - Pen Drive/CD/DVD/Blu-Ray Disk. Flash Memory, Cloud Storage(Like Google Drive, OneDrive)	12
Unit 4	Numbering System and Codes ● Introduction to Binary Codes ○ Nibble / Bit / Byte / Carry Bit / Parity Bit / Sign Bit ○ KB / MB / GB / TB / HB (etc ...) ● Types of Numbering System ○ Binary / Octal/Decimal / Hex-Decimal ● Conversion ○ Binary to Octal, Decimal and Hexa-Decimal ○ Decimal to Binary, Octal and Hexa-Decimal ○ Octal to Binary, Decimal and Hexa-Decimal ○ Hexa-Decimal to Binary, Octal and Decimal ● Binary Arithmetic	12

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	○ Addition ○ Subtraction (1's Compliment and 2's Compliment) ○ Division . ○ Multiplication • Types of Codes ○ ASCII/BCD / EBCDIC / UniCode • Parity Check ○ Event Parity System / Odd Parity System Languages, Operating Systems and Software Packages • Introduction • Translator (Assembler / Compiler / Interpreter) • Types of Languages ○ Machine Level Language ○ Assembly Level Language ○ High Level Language (3GL, 4GL, 5GL, etc.) • Types of Operating Systems ○ Batch Operating System ○ Multi Processing Operating System ○ Time Sharing Operating System ○ Online and Real Time Operating System	
Unit 5	Emerging Technologies and Virus • Different Communication methods ○ GIS / GPS / COMA / GSM/ VOLTE • Communication Devices ○ Cell Phones / Modem / Infrared / Bluetooth / WiFi / LiFi • Virus ○ introduction to Virus and related terms ○ Origin and History ○ Types of Virus ○ Problems and Protection from Virus • Cloud Computing ○ What is Cloud Computing? ○ Characteristic & Service Models(Iaas, Paas, Saas) ○ Architecture ○ Security & Privacy	12

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Reference Books:

1. Computer Fundamentals By P.K.Sinha
2. Fundamental of IT for BCA By S.Jaiswal
3. Engineering Physics By V.K.Gaur
4. Teach Yourself Assembler By Goodwin.

Web site References :

- <https://www.javatpoint.com/computer-fundamentals-tutorial>
- https://www.tutorialspoint.com/computer_fundamentals/index.htm
- https://www.tutorialspoint.com/computer_fundamentals/computer_fundamentals_tutorial.pdf
- http://www.kvadilabad.org/admin/downloads/1788662251computer_fundamentals_tutorial.pdf

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CourseLevel	6.0	InternalMarks	15
Programme	P.G.D.C.A.	ExternalMarks	35
Semester	1	PracticalInternal	00
Categoryof Course	SEC-1	PracticalExternal	00
CourseCredit	2	Prac.ExternalExam Duration	-
TeachingHours	Theory-30 Practical-00	Total	50
CourseCode	OASEC1	ExamDuration	1:00Hrs
CourseTitle	Office Automation Tools & Packages		

Objectives:

- To develop an understanding of the fundamentals, functions, and importance of operating systems.
- To familiarize students with Windows, Linux, and GUI-based operating-system environments.
- To develop practical skills in file, directory, application, and basic system management.
- To enable students to perform basic operating-system configuration and display customization.
- To introduce students to the concepts and applications of word-processing software.
- To develop proficiency in creating, editing, saving, formatting, and printing documents using Microsoft Word.
- To enable students to use text manipulation, paragraph formatting, lists, columns, and page-layout features.
- To develop skills in inserting and managing images, objects, headers, footers, watermarks, and other document elements.
- To enable students to create, format, and manipulate tables effectively.
- To develop practical skills for producing organized, professional, and print-ready documents for academic and professional purposes.

Outcomes:

- Explain the fundamental concepts, functions, and features of GUI-based operating systems, including Windows and Linux.
- Navigate a GUI environment and perform application, file, directory, and basic system-management operations.

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- Configure basic system date, time, and display properties according to user requirements.
- Explain the fundamentals of word-processing software and use Microsoft Word to create, edit, save, and print documents.
- Apply text, paragraph, page, and document formatting techniques, including fonts, alignment, indentation, lists, columns, margins, headers, footers, and watermarks.
- Insert and manipulate images, clip art, objects, and tables in Word documents.
- Create, format, modify, and present professional and print-ready documents using Microsoft Word.
- Apply fundamental operating-system and word-processing skills to solve routine academic, administrative, and professional computing tasks.

Course Contents

UNIT		Hours
Unit 1	INTRODUCTION TO GUI BASED OPERATING SYSTEM • Introduction • Basics of Operating System ○ Operating system ○ Basics of popular operating system (LINUX, WINDOWS) • File and Directory Management • Types of files • The User Interface ○ Task Bar ○ Icons ○ Start Menu ○ Running an Application • Operating System Simple Setting • Changing System Date And Time • Changing Display Properties(Wallpaper, Screen Resolution, Screen Saver, etc)	15
Unit 2	WORD PROCESSING (Microsoft Word) • Introduction to Word Processing Software • Objectives • Word Processing Basics • Opening Word Processing Package ○ Menu Bar • Opening and closing Documents	15

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	○ Opening Documents ○ Save and Save as ○ Page Setup ○ Print Preview ○ Printing of Documents ● Text Creation and manipulation ● Document Creation ○ Editing Text ○ Text Selection ○ Cut, Copy and Paste ○ Font and Size selection ○ Alignment of Text ○ Adding Clip Art Pictures ○ Adding Images ○ Inserting Other Objects ● Formatting the Text ○ Paragraph Indenting ○ Bullets and Numbering ○ Changing case ● Using Format Painter ● Creating Columns inside a Page ● Page Layout and Margins ○ Setting Page Size ○ Changing Page Orientation ○ Setting Page Margins ○ Header and Footers ○ Inserting Watermark ● Table Manipulation ○ Draw Table ○ Changing cell width and height ○ Alignment of Text in cell ○ Delete / Insertion of row and column ○ Border and shading	
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Reference Books:

- 1 Microsoft 365 For Dummies – Wiley, 2025
- 2 Office 2024 For Dummies – Wiley, 2025
- 3 Microsoft Word 2024 Step by Step – Microsoft Press

Web site References:

- Official Office: <https://support.office.com/>
- Microsoft 365 Training – <https://support.microsoft.com/en-us/training>
- Microsoft Learn – <https://learn.microsoft.com/>
- Microsoft Word Help – <https://support.microsoft.com/en-us/word>
- LibreOffice Documentation – <https://documentation.libreoffice.org/>

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Sr. No.	Evaluation Component	4-Credit Subjects (Marks)	2-Credit Subjects (Marks)
1	Assignments, seminars, quizzes, mid-term tests, lab records, presentations, Term Paper, Viva-voce, Projects/Surveys/Field visits, Journal Writing (Any three – 5 marks each for 4-credit; any one – 5 marks for 2-credit)	15	05
2	Mid-Term Evaluation	15	10
TOTAL		30	15

Structure of the External Question Paper (4 Credit)

Ques. No.	Particulars	From which Unit	Marks
1	Questions (Any Two Out Of Four)	1	14
2	Questions (Any Two Out Of Four)	2	14
3	Questions (Any Two Out Of Four)	3	14
4	Questions (Any Two Out Of Four)	4	14
5	Questions (Any Two Out Of Four)	5	14
		Total Marks	70

Structure of the External Question Paper (2 Credit)

Ques. No.	Particulars	From which Unit	Marks
1	Questions (Any Two Out Of Four)	1	14
2	Questions (Any Two Out Of Four)	2	14
3	Questions (Any Two Out Of Four)	From Each Unit	07
		Total Marks	35

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Note: This syllabus has been prepared in accordance with the Regulations for Curriculum and Credit Framework for Postgraduate Programmes (Effective from Academic Year 2026–2027) of Bhakta Kavi Narsinh Mehta University (BKNMU) and is aligned with the National Education Policy (NEP) 2020 and the UGC Curriculum and Credit Framework for Postgraduate Programmes (CCFPG), 2024. The teaching-learning process, assessment, examination, credit requirements, and all other academic provisions shall be governed by the applicable regulations, ordinances, notifications, and guidelines issued by BKNMU from time to time.

This syllabus is prepared with reference to BKNMU Reference No.: બીકેએનએમયુ / એકેડેમિક/૧૪૪૮ / ૨૦૨૬, Dated: 16/06/2026, titled Regulations for Curriculum and Credit Framework for Postgraduate Programmes (Effective from Academic Year 2026–2027).

The official regulations are available at:

<https://bknmu.edu.in/uploads/assest/regulationsforcurriculumandcreditframeworkforpostgraduateprogrammes06162026014654800.pdf>