

DEPARTMENT OF COMPUTER SCIENCE

COURSE CURRICULUM & MARKING SCHEME PROGRAM

CODE: DPDC01

DCA 1st & 2nd SEMESTER

(Based on CBCS)



D. P. VIPRA COLLEGE,

(AN AUTONOMOUS INSTITUTION)

OLD HIGH COURT ROAD BILASPUR (CHHATTISGARH)

RE-ACCREDITED "A" GRADE BY NAAC Phone No: 07752-424497

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Scheme of DCA Under Semester System

Program Code& Name: DPDC01 - DCA

Session 2025-26

Semester	Course Code	Course Name	Credit			Total Credit	Marks			
			L	T	P		ESE	CIA	Total	
									MAX	MIN
First	DCAT101	Computer Fundamental	3	1	-	4	70	30	100	40
	DCAT102	PC Package	3	1	-	4	70	30	100	40
	DCAT103	Desktop Publishing	3	1	-	4	70	30	100	40
	DCAP101	PC Package Lab	-	-	3	3	35	15	50	20
	DCAP105	DTP Lab	-	-	3	3	35	15	50	20
Total						18	280	120	400	160
Second	DCAT201	Internet & Web Technology	3	1	-	4	70	30	100	40
	DCAT202	Programming in C	3	1	-	4	70	30	100	40
	DCAT203	Operating System	3	1	-	4	70	30	100	40
	DCAP201	Programming in C Lab	-	-	3	3	35	15	50	20
	DCAP202	Web Technology Lab	-	-	3	3	35	15	50	20
Total						18	280	120	400	160

Program Code and Name	DPDC01- Diploma in Computer Application			Semester	II
Exam Code and Name	4012 - Diploma in Computer Application First Semester			Paper	I
Course Code	DCAT201			Course Type	T
Course Title	Internet & Web Technology				
Total Credit	4				
Total Marks	CIA: 30/15	ESE: 70/35	Max Marks: 100/50	Min. Pass. Marks: 40/20	
Prerequisites (if any)					
Course Outcomes	CO1: Ability to understand the fundamentals of Internet, web technologies, and network communication. CO2: Ability to create and design static web pages using HTML and CSS. CO3: Ability to develop interactive web pages using JavaScript. CO4: Ability to publish, manage, and maintain websites using web tools and Internet services.				

Contents of Course		
Unit	Contents	No. of Period
I	Internet: Evolution & Protocols of internet, Applications of Internet, Internet Vs Internet, Growth of Internet, History of Internet	15
II	WWW, World Wide Web (WWW) History, Working, Web Browsers, client server architecture. Connectivity - Dial-up, Leased line, VSAT etc., URLs, Domain names, Portals, Applications. E-Mail: Concepts, Basics of Sending & Receiving, E-mail, Free E-mail services.	15
III	Searching the Web, HTTP, URLs, Web Servers, Web Protocols. Web Publishing Concepts, Domain Name Registration, HTML, Design Tools, HTML Editors, Image Editors.	15
IV	Introduction to HTML, HTML Concepts of Hypertext, Versions of HTML, Elements of HTML Syntax, Head & Body Sections, HTML tags, Inserting Texts formatting, text style. Images, Hyperlinks, Backgrounds and Colour Controls, Table Layout and Presentation, Use of Font Size & Attributes, List types and its Tags, Forms.	15
	Total no. of Lectures	60

Text books	1. Thomas A. Powel ; Web Design : C.R.; Second Edition; TMH, 2009. 2. Thomas A. Powel ; HTML & XHTML : C.R.; Fourth Edition; TMH, 2008.
Reference books	1. M.L. Young: Complete Reference b: Internet; 2nd Edition; Tata Mc Graw Hill,2006. 2. Harely Hahn: The Internet, Tata Mc Graw Hill. 3. s on HTML, BPB Publications. 4. Joel Sklar: Principles of Web Design, BPB PublicationsG. Robertson: Hand

Assessment and Evaluation		
Suggested Continuous Evaluation Methods:		
Maximum Marks: 100 Marks	Continuous Internal Assessment (CIA): 30 Marks	End Semester Exam (ESE) : 70 Marks
Continuous Internal Assessment (CIA)	Internal Test/Quiz- (2): 20 & 20 Assignment / Seminar: 10 Total Marks: 30	Better marks out of the two Test / Quiz + obtained marks is Assignment shall be considered against 30 Marks
End Semester Exam (ESE)	Three Section - A, B & C Section A: Q1. Objective- 10 x 1 = 10 Mark; Section B: Long Answer type questions 1 out of 2 from each unit- 4 x 5 = 20 Marks; Section C: Descriptive answer type questions 1 out of 2 from each unit- 4 x 10 = 40 Marks;	

Program Code and Name	DPDC01- Diploma in Computer Application			Semester	II
Exam Code and Name	4012 - Diploma in Computer Application First Semester			Paper	II
Course Code	DCAT202			Course Type	T
Course Title	Programming in C				
Total Credit	4				
Total Marks	CIA: 30/15	ESE: 70/35	Max Marks: 100/50	Min. Pass. Marks: 40/20	
Prerequisites (if any)					
Course Outcomes	CO1. Understanding the basic terminology used in computer programming. CO2. Writing, compiling and debugging programs in C language using different data types. CO3. Designing programs involving decision structures, loops and functions, arrays and strings. CO4. Understanding pointers and use of structure and union.				

Contents of Course		
Unit	Contents	No. of Period
I	Fundamentals of C: Programming Concepts, Pseudocode, Algorithm, Flowchart, History and importance of C, Basic Structure and Execution of C Program, Constants, Variables, and Data Types, Operators and Expressions, Operator Precedence and Associativity, Managing Input and Output Operations.	15
II	Branching & Looping: if statement, if...else statement, nesting of if else statement, else if ladder, switch statement, Goto statement. Looping: while loop, do_while loop, for loop. Arrays and Strings: One-dimensional arrays, Declaration and Initialization, Two-dimensional arrays, Declaration and Initialization, Character arrays. String: Reading and Writing strings, String-handling functions.	15
III	Functions: Need, Elements of user-defined functions, Definition of Functions, Function call and declaration, Category of Functions, Parameter Passing, Recursion, Passing arrays to functions, Passing strings to functions. Storage Classes: Scope, visibility and life time of variables.	15
IV	Understanding Pointers: Accessing the address of a variable, declaration and initialization of pointer variables, accessing a variable through its pointer, pointer arithmetic, pointer to pointer, Array through pointers. Structures and Unions: Defining structure, Declaring structure variables, Accessing structure members, Structure initialization, Operation on individual members, Array of structures, Union.	15
Total no. of Lectures		60

Text books	1. E. Balagurusamy – Programming in ANSI C, 3rd Edn., TMH, New Delhi ; 2004.
Reference books	1. Programming with C, B.S.Gottfried (TMH). 2. Y. Kanetkar – Let us C, 4th Edition, BPB Publication , New Delhi; 2002. 3. Kerighan& Richie The C programming language (PHI Publication).

Assessment and Evaluation		
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Maximum Marks: 100 Marks	Continuous Internal Assessment (CIA): 30 Marks	End Semester Exam (ESE) : 70 Marks
Continuous Internal Assessment (CIA)	Internal Test/Quiz- (2): 20 & 20 Assignment / Seminar: 10 Total Marks: 30	Better marks out of the two Test / Quiz + obtained marks is Assignment shall be considered against 30 Marks
End Semester Exam (ESE)	Three Section - A, B & C Section A: Q1. Objective- 10 x 1 = 10 Mark; Section B: Long Answer type questions 1 out of 2 from each unit- 4 x 5 = 20 Marks; Section C: Descriptive answer type questions 1 out of 2 from each unit- 4 x 10 = 40 Marks;	

Program Code and Name	DPDC01- Diploma in Computer Application			Semester	II
Exam Code and Name	4012 - Diploma in Computer Application First Semester			Paper	III
Course Code	DCAT203			Course Type	T
Course Title	Operating system				
Total Credit	4				
Total Marks	CIA: 30/15	ESE: 70/35	Max Marks: 100/50	Min. Pass. Marks: 40/20	
Prerequisites (if any)					
Course Outcomes	CO1: Recognizing the basic and types of operating system. CO2: Understanding Process and CPU scheduling and deadlock handling to manage process. CO3: Understanding logical and physical address space, paging and segmentation. CO4: Learning Device Management and file system implementation and file system interface.				

Contents of Course		
Unit	Contents	No. of Period
I	Introduction to Operating System: What is an Operating System, Architecture of Operating Systems, Types of Operating Systems, Process Model, Process States and Transitions, System Calls.	15
II	Process Management: Process Scheduling, Cooperating Processes, Inter-process Communication, CPU Scheduling: Scheduling Criteria, Scheduling Algorithms, Process Synchronization: Background, Deadlocks.	15
III	Memory Management: Background, Logical versus Physical Address space, swapping, Contiguous allocation, Paging, Segmentation, Segmentation with Paging, Virtual Memory: Demand Paging.	15
IV	Device Management: Device Management: Techniques for Device Management, Dedicated Devices, Shared Devices. File-System Implementation: A Simple File System, Logical & Physical File System, FileSystem Interface: Access Methods, Directory Structure, Free-Space Management, Directory Implementation.	15
Total no. of Lectures		60

Text books	1. Operating System Concepts, Silberschatz and Galvin, Pearson Education Pub. 2. Operating Systems Internals and Design Principle, William Stallings, Prentice Hall Publishers.
Reference books	1. Operating Systems, A. S. Tannenbaum, PHI. 2. Operating Systems - A Concept Based Approach, Dhananjay M. Dhamdhare, TMH.

Assessment and Evaluation		
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Maximum Marks: 100 Marks	Continuous Internal Assessment (CIA): 30 Marks	End Semester Exam (ESE) : 70 Marks
Continuous Internal Assessment (CIA)	Internal Test/Quiz- (2): 20 & 20 Assignment / Seminar: 10 Total Marks: 30	Better marks out of the two Test / Quiz + obtained marks is Assignment shall be considered against 30 Marks
End Semester Exam (ESE)	Three Section - A, B & C Section A: Q1. Objective- 10 x 1 = 10 Mark; Section B: Long Answer type questions 1 out of 2 from each unit- 4 x 5 = 20 Marks; Section C: Descriptive answer type questions 1 out of 2 from each unit- 4 x 10 = 40 Marks;	

Program Code and Name	DPDC01- Diploma in Computer Application			Semester	II
Exam Code and Name	4012 - Diploma in Computer Application First Semester			Paper	I
Course Code	DCAP101			Course Type	P
Course Title	Internet & Web Technology				
Total Credit	3				
Total Marks	CIA: 30	ESE: 70	Max Marks: 100	Min. Pass. Marks: 40	
Prerequisites (if any)					
Course Outcomes	CO1: Ability to use Internet services for web browsing, information searching, and online communication. CO2: Ability to create and format basic web pages using HTML. CO3: Ability to use email services such as Gmail for sending, receiving, and managing emails. CO4: Ability to access, download, organize, and manage online resources using web browsers and Internet				

Contents of Course	
Important Guidelines for Project	No. of Period
<ol style="list-style-type: none"> 1. Open a web browser and search information about computer generations using an Internet search engine. 2. Create and send an email using Gmail. 3. Attach a file and send it through Gmail. 4. Create a new folder in Gmail and organize emails. 5. Search and download an image from the Internet and save it in a folder. 6. Visit educational websites and bookmark useful web pages in a browser. 7. Create a simple web page displaying your name and address using HTML. 8. Create a web page using heading and paragraph tags in HTML. 9. Design a web page using bold, italic, underline, and font tags in HTML. 10. Create ordered and unordered lists in HTML. 11. Insert images and hyperlinks in a web page using HTML. 12. Create a timetable using table tags in HTML. 13. Design a student registration form using form tags in HTML. 14. Create a web page with background color and text color using basic HTML attributes. 15. Create a simple webpage about your college using HTML. 	60

Text books	<ol style="list-style-type: none"> 1. Thomas A. Powel ; Web Design : C.R.; Second Edition; TMH, 2009. 2. Thomas A. Powel ; HTML & XHTML : C.R.; Fourth Edition; TMH, 2008.
Reference books	<ol style="list-style-type: none"> 1. M.L. Young: Complete Reference b: Internet; 2nd Edition; Tata Mc Graw Hill,2006. 2. Harely Hahn: The Internet, Tata Mc Graw Hills on HTML, BPB Publications. 3. Joel Sklar: Principles of Web Design, BPB PublicationsG. Robertson: Hand

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Continuous Internal Assessment (CIA)	Internal Test/Quiz- (2): 20 & 20 Assignment / Seminar: 10 Total Marks: 30	Better marks out of the two Test / Quiz + obtained marks is Assignment shall be considered against 30 Marks
End Semester Exam (ESE)		

Program Code and Name	DPDC01- Diploma in Computer Application			Semester	II
Exam Code and Name	4012 - Diploma in Computer Application First Semester			Paper	II
Course Code	DCAP102			Course Type	P
Course Title	Programming in C				
Total Credit	3				
Total Marks	CIA: 30	ESE: 70	Max Marks: 100	Min. Pass. Marks: 40	
Prerequisites (if any)					
Course Outcomes	CO1. Understanding the basic terminology used in computer programming. CO2. Writing, compiling and debugging programs in C language using different data types. CO3. Designing programs involving decision structures, loops and functions, arrays and strings. CO4. Understanding pointers and use of structure and union.				

Contents of Course	
Important Guidelines for Project	No. of Period
<ol style="list-style-type: none"> 1. Write a program to print “Hello World” using C. 2. Write a program to perform addition, subtraction, multiplication, and division of two numbers in C. 3. Write a program to find whether a number is even or odd using C. 4. Write a program to find the largest of two numbers using C. 5. Write a program to check whether a number is positive or negative using C. 6. Write a program to calculate the factorial of a number using C. 7. Write a program to generate the Fibonacci series using C. 8. Write a program to check whether a number is prime or not using C. 9. Write a program to reverse a number using C. 10. Write a program to find the sum of digits of a number using C. 11. Write a program to find the greatest among three numbers using C. 12. Write a program to display multiplication table of a number using C. 13. Write a program to sort elements of an array in ascending order using C. 14. Write a program to find the length of a string using C. 15. Write a program to swap two numbers using call by value in C. 	60

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End Semester Exam (ESE)		