



<b>Program</b>	Bachelor of Vocational (B Voc)	<b>Semester - 1</b>
<b>Type of Course</b>	-	
<b>Prerequisite</b>		
<b>Course Objective</b>	-	

Teaching Scheme (Contact Hours)				Examination Scheme				
Lecture	Tutorial	Lab	Credit	Theory Marks		Practical Marks		Total Marks
				SEE (T)	CIA (T)	SEE (P)	CIA (P)	
3	-	-	3	50	-	-	-	50

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content		T - Teaching Hours   W - Weightage	
Sr.	Topics	T	W
1	<b>Basics of C</b>  Introduction of programming languages, Flowcharts and Algorithms, Basic structure of C program, Types of constants, variables, basic data types, operators, Declarations and Statements, Formatted Input and Output Statements, precedence and associativity, expressions, evaluation of expressions, type conversion, I/O functions	6	20
2	<b>Decision Making and Looping</b>  if and if...else statement, nested and ladder if...else, elseif, conditional operator, switch statement, goto statement with warning, while, do...while, and for loops, nested loops, Single level Break and Multi level control Break statements, continue statements	9	20
3	<b>Array &amp; String</b>  Introduction to arrays, declaration, initialization and access of one-dimensional and two dimensional arrays, Introduction to multi-dimensional and variable length arrays, declaration and initialization of strings, string storage, string handling functions, list of strings	9	20
4	<b>Functions</b>  <b>Functions:</b> Function prototype and function declaration, function definition, function call, actual and formal parameters/arguments, return type and return statement, Function invocation: Call by value and Call by Functions, Nested function call, recursion, scope, visibility, and lifetime of variables  <b>Structures:</b> Defining structure, declaring and initializing structure variables, accessing structure members, copying and comparing structure variables, nested structures, arrays and structures, structures and functions, unions	10	20
5	<b>Pointers</b>	8	20

**Course Content**

T - Teaching Hours | W - Weightage

Sr.	Topics	T	W
	<b>Pointers:</b> Introduction to Pointers, declaration and initialization of pointer variables, Accessing variables using pointer, chain of pointers, passing arrays and strings to the function, array of pointers, pointers and functions, pointers and structures, Dynamic memory allocation, malloc, calloc  <b>File Handling:</b> Introduction to file management and its functions		
<b>Total</b>		<b>42</b>	<b>100</b>

**Suggested Distribution Of Theory Marks Using Bloom's Taxonomy**

Level	Remembrance	Understanding	Application
<b>Weightage</b>	10	20	20

NOTE : This specification table shall be treated as a general guideline for the students and the teachers. The actual distribution of marks in the question paper may vary slightly from above table.

**Course Outcomes****At the end of this course, students will be able to:**

C01	Understand the concepts of flowcharts to represent algorithms visually and manipulate data effectively.
C02	Utilize the concepts of loops and decision structures to solve complex problems.
C03	Implement a programming solution using arrays and strings.
C04	Understand and effectively apply functions and structures in programming.
C05	Use concepts of pointer and file management to solve engineering problems.

**Reference Books**

1.	<b>Programming In ANSI C by E. Balagurusamy published by Tata Mc Graw Hill</b>
2.	<b>Let Us C</b> By Kanetkar, Yashavant P   BPB Publications