

RGPV (DIPLOMA WING) BHOPAL		OBE CURRICULUM FOR THE COURSE		FORMAT- <b>3</b>	Sheet No. 1/3
Branch	Computer Science and Engineering			Semester	2 <sup>nd</sup>
Course Code		Course Name	Programming in C		
Course Outcome 1	<b>Explain basic constructs of C programming.</b>			Teach Hrs	Marks
Learning Outcome 1	Explain programming paradigm.			7	10
Contents	Language processors - Compiler, interpreter, Linker, Loader, assembler. Procedural and non procedural languages. Structured Programming Approach. Flowcharts.				
Method of Assessment	End sem theory exam				
Learning Outcome 2	<b>Explain steps to set up a C programming environment including a code editor and compiler.</b>			8	10
Contents	Set-up path for the C compiler. Creating, editing, compiling and executing C programs using editor/command line utility.				
Method of Assessment	Lab work				
Learning Outcome 3	<b>List various elements of a C program.</b>			10	10
Contents	C character set, keywords , constants, variables, C instructions/statements. Data Types in C - Primary(Built-in), Derived, User Defined Data Types. sections/structure of a c program - Document section, Link(Preprocessor) section, Global Declaration Section, , Main Function, Function Declaration Section.				
Method of Assessment	End sem theory exam				
Learning Outcome 4	<b>List various operators, preprocessors and Format specifiers used in C</b>			8	10
Contents	<b>Operators-</b> Arithmetic operators, Increment/decrement operator, Assignment operator, Relational operator, Logical Operator, Conditional operators, Bitwise Operators, sizeof operator. <b>C preprocessors , Macros.</b> <b>Format specifiers in C</b> - Character format specifier (%c), Integer format specifier (%d, %i, %u), Floating-point format specifier (%f, %e or %E), Long/double format specifier (%l, %lf) String printing:(%s), Address Printing (%p), Octal/hexadecimal number for integer : (%o, %x, %X)				
Method of Assessment	End sem theory exam				

<b>Course Outcome 2</b>	<b>Write programs using basic constructs.</b>	<i>Teach Hrs</i>	<i>Marks</i>
<b>Learning Outcome 1</b>	Solve expressions composed of multiple operators and operands.	10	15
<b>Contents</b>	Arithmetic expressions, Relational expressions, Logical expressions, Conditional expressions. Errors in C - Syntax Error, Run-time error, Linker error, Logical error, Semantic error.		
<b>Method of Assessment</b>	<b>Mid Term Test/Quiz</b>		
<b>Learning Outcome 2</b>	<b>Determine result of input/output function for various arguments</b>	11	10
<b>Contents</b>	printf(), scanf(), Format control string, Escape Sequences in C. getchar(), putchar(), getch(), putch()		
<b>Method of Assessment</b>	<b>Lab work</b>		
<b>Learning Outcome 3</b>	<b>Explain syntax of various decision control statements</b>	6	10
<b>Contents</b>	syntax and flowchart of if statement, if- else, nested if, use of Relational and logical operators, goto statement, switch case statement.		
<b>Method of Assessment</b>	End sem theory exam		
<b>Learning Outcome 4</b>	<b>Write Programs to perform test using decision control statements</b>	10	15
<b>Contents</b>	Various programs to make decisions based on boolean conditions.		
<b>Method of Assessment</b>	<b>Practical Exam</b>		
<b>Course Outcome 3</b>	<b>Apply loop control statements to solve problems.</b>	<i>Teach Hrs</i>	<i>Marks</i>
<b>Learning Outcome 1</b>	Explain syntax of various loop control statements	6	10
<b>Contents</b>	syntax and flowchart of for-statement, while-statement, Do and Do-while statement, break and continue statement, nested looping, infinite loop.		
<b>Method of Assessment</b>	<b>End sem theory exam</b>		
<b>Learning Outcome 2</b>	<b>Write Programs using loop control statements.</b>	10	15
<b>Contents</b>	Various programs to repeat a block of statements.		
<b>Method of Assessment</b>	<b>Practical Exam</b>		

<b>Course Outcome 4</b>	<b>Write programs using Looping constructs.</b>	Teach Hrs	Marks
<b>Learning Outcome 1</b>	<b>Use arrays to store multiple values in a variable.</b>	11	10
<b>Contents</b>	Arrays : types, declaration and initialization of one dimensional and two dimensional array, accessing array elements.		
<b>Method of Assessment</b>	<b>End sem theory exam</b>		
<b>Learning Outcome 2</b>	<b>Use function to write programs</b>	11	15
<b>Contents</b>	Functions : need of functions, prototype declaration, defining function, passing parameters. Function calling mechanism - call by value and call by reference. Recursion and its types. Storage Classes in C		
<b>Method of Assessment</b>	<b>Mid Term Test/Quiz</b>		
<b>Learning Outcome 3</b>	<b>Use various library functions to write programs.</b>	12	10
<b>Contents</b>	Various Library/built in functions, String functions, Math Functions, Time functions, Character type functions, Memory management function.		
<b>Method of Assessment</b>	<b>End sem theory exam</b>		

LOs for End Sem exam(70)	1.1, 1.3, 1.4, 2.3, 3.1, 4.1, 4.3	70 = 10 * 7
LOs for External Practical Exam(30)	2.4, 3.2	30 = 15 + 15
LOs for Internal assessment practical component/ Lab work(20)	1.2, 2.2	20 = 10 + 10
LOs for Internal assessment Theory component (30)	2.1, 4.2	30 = 15 + 15