PRASAD V. POTLURI SIDDHARTHA INSTITUTE OF TECHNOLOGY

(Autonomous)

KANURU, VIJAYAWADA-520007

I B.Tech – I Sem CSE (DATA SCIENCE)

PROGRAMMING FOR PROBLEM SOLVING USING C LAB

Course Code	20ES1154	Year	I	Semester:	I
Course Category	Engineering Sciences	Branch	CSE(Data Science)	Course Type	Practical
Credits	1.5	L-T-P	0-0-3	Prerequisites	-
Continuous Internal Evaluation	15	Semester End Examination	35	Total Marks	50

Course Outcomes		
Upon successful completion of the course, the student will be able to:		
CO1	Apply Structured Programming/C constructs for solving problems.	**L3**
CO2	Implement programs as an individual on different IDEs/ online platforms.	**L3**
CO3	Develop an effective report based on various programs implemented.	**L3**
CO4	Apply technical knowledge for a given problem and express it with effective oral communication.	**L3**
CO5	Analyze outputs using given constraints/test cases.	**L4**

Syllabus		
Expt. No.	**Contents**	**Mapped CO's**
1	Develop algorithms and flowcharts for various problems.	**CO1,CO2,CO3,CO4,CO5**
2	Programs to demonstrate Data Types, format specifiers and I/O Statements.	**CO1,CO2,CO3,CO4,CO5**
3	Programs to demonstrate the use of Operators in C and apply them in solving various problems.	**CO1,CO2,CO3,CO4,CO5**
4	Programs to demonstrate the usage of decision control statements and apply them in solving various problems.	**CO1,CO2,CO3,CO4,CO5**
5	Programs to demonstrate the usage of looping statements and applying them in solving various problems.	**CO1,CO2,CO3,CO4,CO5**
6	Programs to demonstrate arrays' usage and application in solving various problems.	**CO1,CO2,CO3,CO4,CO5**
7	Programs to demonstrate the usage of strings and apply them in solving various problems.	**CO1,CO2,CO3,CO4,CO5**
8	Programs to demonstrate the usage of functions and apply them in solving various problems.	**CO1,CO2,CO3,CO4,CO5**
9	Programs to demonstrate recursive functions' usage and application in solving various problems.	**CO1,CO2,CO3,CO4,CO5**
10	Programs to demonstrate the usage of pointers and apply them in solving various problems.	**CO1,CO2,CO3,CO4,CO5**
11	Programs to demonstrate the usage of structure and unions and apply them in solving various problems.	**CO1,CO2,CO3,CO4,CO5**
12	Programs to demonstrate the usage of files and apply them in solving various problems.	**CO1,CO2,CO3,CO4,CO5**
13	Use Case-1	**CO1,CO2,CO3,CO4,CO5**
14	Use Case-2	**CO1,CO2,CO3,CO4,CO5**

Learning Resources
Text Books:
1. Programming in C, Reema Thareja, Oxford University Press, AICTE Edition, 2018.
Reference Books:
1. Computer Science: A Structured ProgrammingApproach using C, B. A. Forouzan and R. F. Gilberg, Third edition, Cengage Learning, 2007.   2. Programming in C, Pradip Dey, Manas Ghosh, Oxford University Press, AICTE Edition.   3. The C Programming Language, Brian W. Kernighan and Dennis Ritchie, Second Edition, Pearson Publications.   4. Programming with C, B. Gottfried, Third edition, Schaum's outlines, McGraw Hill (India), 2017.   5. Problem Solving and Program Design in C, Jeri R. Hanly, Ellot B. Koffman, Fifth edition,Pearson.   6. How to Solve it by Computer, R.G. Dromey, First edition, Pearson Education, 2006.
e- Resources & other digital material:
1. http://cprogramminglanguage.net/   2. https://www.geeksforgeeks.org/c-programming-language/   3. https://www.greatlearning.in/academy/learn-for-free/courses/c-programming   4. https://www.udemy.com/course/the-complete-c-programming/   5. https://nptel.ac.in/courses/106/105/106105171