Gayatri Vidya Parishad College of Engineering (Autonomous), Madhurawada, Visakhapatnam- 530048

Department of Computer Science and Engineering

2022 - 23

SCHEME OF COURSE WORK

Course Details:

Course Title	Programming for Problem Solving using C Lab		
Course Code	**22CT1102**	**L T P C**	0 0 3 1.5
Program:	B.Tech.		
Specialization:	Computer Science and Engineering		
Semester	II		
Prerequisites	Basic Mathematical Foundation		
Courses to which it is a prerequisite	Any other programming languages		

Course Outcomes (Cos):

At the end of the course, a student will be able to

1	Apply the concepts of variables, data types, operators and expressions.
2	Demonstrate the usage of Conditional and Unconditional statements.
3	Demonstrate the usage of functions and related functions with respect to arrays and strings.
4	Implement the concept of pointers and structures.
5	Demonstrate the usage of files and Command Line Arguments.

Programme Outcomes (POs):

1	Apply the knowledge of mathematics, science, engineering fundamentals and principles of Information Technology to solve problems in different domains.
2	Analyze a problem, identify and formulate the computing requirements appropriate to its solution.
3	Design and develop software components, patterns, processes, Frameworks and applications that meet specifications within the realistic constraints including societal, legal and economic to serve the needs of the society
4	Design and conduct experiments, as well as analyze and interpret data
5	Use appropriate techniques and tools to solve engineering problems.
6	Understand the impact of Information technology on environment and the evolution and importance of green computing.
7	Analyze the local and global impact of computing on individual as well as on society and incorporate the results in to engineering practice.
8	Demonstrate professional ethical practices and social responsibilities in global and societal contexts.
	Function effectively as an individual, and as a member or leader in diverse and multidisciplinary teams.
10	Communicate effectively with the engineering community and with society at large.
11	Understand engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects.
12	Recognize the need for updating the knowledge in the chosen field and imbibing learning to learn skills

Course Outcome versus **Program Outcomes** versus **Program Specific Outcomes**

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO-1	3	2	2	2	2								3		
CO-2	3	2	2		2								3		
CO-3	2	2	2	2	2								3		
CO-4	2	2	3	2	2								3		
CO-5	2	2	3		2								3		

3 - Strongly correlated, *2* - *Moderately* correlated, *Blank* - *No correlation*

Assessment Methods:		Day to Day Analysis / Internal Lab Examination

Teaching-Learning and Evaluation

Week	TOPIC / CONTENTS	Course Outcomes	Sample question	TEACHING-LEARNING STRATEGY	Assessment Method & Schedule
1	**Week 1** (Basic programs)	CO1	C program to perform temperature conversions from Centigrade to Fahrenheit and vice versa.	Lecture PPT Program Execution	Day-to-Day Analysis
2	**Week 2** (Programs on operators)	CO1	C program to perform all bit wise operations	Lecture PPT Program Execution	Day-to-Day Analysis
3	**Week3** (Programs on conditional statements)	CO2	C program to display the nature and roots of a quadratic equation.	Lecture PPT Program Execution	Day-to-Day Analysis
4	**Revision/ Doubts clarification**				
5	**Week4**(Programs on loop statements)	CO2	C program to print odd numbers between specified ranges	Lecture PPT Program Execution	Day-to-Day Analysis
6	**Week 5** (Programs on functions)	CO3	rogram to find the LCM of two numbers using functions.	Lecture PPT Program Execution	Day-to-Day Analysis
7	**Week 6** (Programs on arrays)	CO3	C program to read n integer values into an array and display them	Lecture PPT Program Execution	Day-to-Day Analysis
	Lab Internal – 1				
8	**Week 7** (Programs on strings)	CO3	C program that reads two integers as strings and display their sum.	Lecture PPT Program Execution	Day-to-Day Analysis

9	**Week 8** (Programs on strings)	CO3	C program to demonstrate the usage of at least 10 predefined string handling functions.	Lecture PPT Program Execution	Day-to-Day Analysis
10	**Week 9** (Programs on pointers and dynamic memory allocation)	CO4	C program to demonstrate the usage of pointers.	Lecture PPT Program Execution	Day-to-Day Analysis
11	Revision/ Doubts clarification				
12	**Week 10** (Programs on pointers)	CO4	C program to demonstrate the following Pointers to Pointers	Lecture PPT Program Execution	Day-to-Day Analysis
13	**Week 11** (Programs on structures)	CO4	C program to access and display the members of the structure.	Lecture PPT Program Execution	Day-to-Day Analysis
14	**Week 12** (Programs on files)	CO5	C program to copy the contents of one file to another.	Lecture PPT Program Execution	Day-to-Day Analysis
15	Revision/ Doubts clarification				
16	**Lab Internal – 2**				
17	END EXAM				