

### Problem Solving and Programming Lab

<b>Course Code</b>	19ES1252	<b>Year</b>	I	<b>Semester</b>	II
<b>Course Category</b>	Engineering Sciences	<b>Branch</b>	ECE	<b>Course Type</b>	Lab
<b>Credits</b>	1.5	<b>L-T-P</b>	0-0-3	<b>Prerequisites</b>	Nil
<b>Continuous Internal Evaluation:</b>	25	<b>Semester End Evaluation:</b>	50	<b>Total Marks:</b>	75

<b>Course Outcomes</b>	
Upon successful completion of the course, the student will be able to	
<b>CO1</b>	Build algorithm and flowchart for simple problems.
<b>CO2</b>	Use suitable control structures to solve problems.
<b>CO3</b>	Use suitable iterative statements and arrays to solve the problems.
<b>CO4</b>	Implement Programs using functions and pointers.
<b>CO5</b>	Develop code for complex applications using structures, unions and file handling features.

<b>Contribution of Course Outcomes towards achievement of Program Outcomes &amp; Strength of correlations (H:High, M: Medium, L:Low)</b>														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	M	M										L	M	M
CO2	M	M	M		M							L	M	M
CO3	M	M	M		M							L	M	M
CO4	M	M	M		M							L	M	M
CO5	M	M	M		L							L	M	M

<b>Syllabus</b>		
Expt. No.	Contents	Mapped CO
I	Draw flowcharts for fundamental algorithms.	CO1
II	C Programs to demonstrate C-tokens.	CO2
III	C Programs on usage of operators.	
IV	C Programs to demonstrate Decision making and branching (Selection)	
V	C programs to demonstrate different loops.	CO3
VI	C programs to demonstrate 1-D arrays.	
VII	C programs to demonstrate multi-dimensional arrays.	
VIII	C programs to perform operations on strings with String handling functions and without String handling functions.	CO4
IX	C programs to demonstrate functions.	
X	C programs on pointers.	CO5
XI	C programs on structures and unions.	
XII	C programs to demonstrate files.	

<b>Learning Resources</b>
<b>Text Books</b>
<ol style="list-style-type: none"> <li>1.R.G. Dromey, How to Solve it by Computer, 1/e, Pearson Education, 2006.</li> <li>2.ReemaThareja , Programming in C, Oxford University Press, AICTE Edition, 2018.</li> </ol>
<b>Reference Books</b>
<ol style="list-style-type: none"> <li>1.B. A. Forouzan and R. F. Gilberg, Computer Science: A Structured Programming Approach Using C, 3/e, Cengage Learning, 2007.</li> <li>2. PradipDey, Manas Ghosh, Programming in C, Oxford University Press, AICTE Edition,</li> <li>3.B. Gottfried, Programming with C, 3/e, Schaum’s outlines, McGraw Hill (India), 2017.</li> <li>4.Jeri R. Hanly, Elliot B. Koffman, Problem Solving and Program Design in C, 5/e, Pearson.</li> </ol>
<b>e- Resources &amp; other digital material</b>
<ol style="list-style-type: none"> <li>1. <a href="http://cprogramminglanguage.net/">http://cprogramminglanguage.net/</a></li> <li>2. <a href="https://www.geeksforgeeks.org/c-programming-language/">https://www.geeksforgeeks.org/c-programming-language/</a></li> <li>3. <a href="https://nptel.ac.in/courses/106105085/4">https://nptel.ac.in/courses/106105085/4</a></li> </ol>