Maharashtra State Board of Technical Education, Mumbai **K2-A (PRACT)**

LABORATORY PRACTICAL PLANNING

Institute Name: K. K. Wagh Polytechnic, Nashik **Date:** 15/12/2025
Academic Year: 2025-26 (EVEN)
Programme: Information Technology (IF) **Course: Programming in C (PIC)** **Course Code:** 312303
Semester: Second **Scheme:** K **Name of Faculty:** Ms. M. S. Karande
Class: FYIF-CRAY Batch: A/B/C

• Teaching-Learning & Assessment Scheme:

Course Code	Course Title	Abbr	Course Category	Learning Scheme					Credits	Paper Duration	Assessment Scheme										
				Actual Contact Hrs./Week			SLH	NLH			Theory				Based on LL & TSL Practical				Based on SL		Total Marks
											FA-TH	SA-TH	Total		FA-PR		SA-PR		SLA		
				CL	TL	LL					Max	Max	Max	Min	Max	Min	Max	Min	Max	Min	
312303	Programing in C	PIC	AEC	4	1	4	1	10	5	3	30	70	100	40	50	20	50#	20	25	10	225

Total IKS Hrs for Sem. : 0 Hrs
Abbreviations: CL- Class Room Learning , TL- Tutorial Learning, LL-Laboratory Learning, SLH-Self Learning Hours, NLH-Notional Learning Hours, FA - Formative Assessment, SA -Summative assessment, IKS – Indian Knowledge System, SLA - Self Learning Assessment
Legends: @ Internal Assessment, # External Assessment, *# On Line Examination, @$ Internal Online Examination

- **COURSE LEVEL LEARNING OUTCOMES (COS)**

By learning course Programing in C PIC-312303) First Year students will be able to achieve & demonstrate the following COs on completion of course based learning.

- CO1 - Develop C program using input - output functions and arithmetic expressions
- CO2 - Develop C program involving branching and looping statements
- CO3 - Implement Arrays and structures using C programs
- CO4 - Develop C program using user-defined functions
- CO5 - Write C program using pointer

• COs, Practical Laboratory Learning Outcome (LLOs) and Mapping:

Sr. No	LLO	Practical Title	Planned Date	Performance Date	Remarks	Related self-learning (if any)
1.	LLO 1.1 LLO 1.2	* Install and study the C programming environment	A- 18/12/2025 B-15/12/2025 C-16/12/2025	A- B- C-		
2.	LLO 3.1	*Implement C programs using arithmetic operators to solve given arithmetic operations	A- 26/12/2025 B-22/12/2025 C-23/12/2025	A- B- C-		
3.	LLO 5.1	* Write well commented C programs using formatted Input /Output statements.	A-01/01/2026 B-29/12/2025 C-30/12/2025	A- B- C-		
4.	LLO 6.1 LLO 6.2	* Implement minimum two C programs using Relational and conditional operator.	A- 02/01/2026 B-05/01/2026 C-06/01/2026	A- B- C-		
5.	LLO 7.1	*Implement minimum two C programs using Logical Operators	A-09/01/2026 B-12/01/2026 C-13/01/2026	A- B- C-		

Maharashtra State Board of Technical Education, Mumbai **K2-A (PRACT)**

LABORATORY PRACTICAL PLANNING

Institute Name: K. K. Wagh Polytechnic, Nashik **Date:** 15/12/2025
Academic Year: 2025-26 (EVEN)
Programme: Information Technology (IF) **Course: Programming in C (PIC)** **Course Code:** 312303
Semester: Second **Scheme:** K **Name of Faculty:** Ms. M. S. Karande
Class: FYIF-CRAY Batch: A/B/C

Sr. No	LLO	Practical Title	Planned Date	Performance Date	Remarks	Related self-learning (if any)
6.	LLO 10.1	* Implement minimum two C programs using nested If else statement and if. else if ladder	A-16/01/2026 B-19/01/2026 C-20/01/2026	A- B- C-		
7.	LLO 11.1	* Develop C program using Switch statements	A-23/01/2026 B-22/01/2026 C-27/01/2026	A- B- C-		
8.	LLO 12.1	* Write a C program to print English Calendar months as per given number using Switch statement	A-30/01/2026 B-29/01/2026 C-03/02/2026	A- B- C-		
9.	LLO 13.1	* Implement minimum two C programs using 'while' loop and 'do...while' loop statements.	A-06/02/2026 B-02/02/2026 C-06/02/2026	A- B- C-		
10.	LLO 14.1 LLO 14.2	Implement C programs using for loop statement	A- 12/02/2026 B-05/02/2026 C-10/02/2026	A- B- C-		
11.	LLO 15.1 LLO 15.2	* Print various patterns using loops.	A- 13/02/2026 B-09/02/2026 C-13/02/2026	A- B- C-		
12.	LLO 16.1 LLO 16.2	* Implement C programs using One Dimensional Array. (e.g.- Write C program to input 5 numbers using array and display sum of it)	A-19/02/2026 B-12/02/2026 C-17/02/2026	A- B- C-		
13.	LLO 17.1 LLO 17.2	* Implement C programs using Two-Dimensional Array. (e.g.- Write C program to calculate addition of two 3X3 matrices.)	A-20/02/2026 B-16/02/2026 C-20/02/2026	A- B- C-		
14.	LLO 18.1 LLO 18.2	* Write C program to perform following operations without using standard string functions.	A-26/02/2026 B-23/02/2026 C-24/02/2026	A- B- C-		
15.	LLO 19.1	Implement 'Structure' in C	A-27/02/2026 B-26/02/2026 C-27/02/2026	A- B- C-		
16.	LLO 20.1	* Implement ' Array of Structure' in C (e.g.-Accept and Display 10 Employee information using structure)	A-05/03/2026 B-02/03/2026 C-06/03/2026	A- B- C-		

LABORATORY PRACTICAL PLANNING

Institute Name: K. K. Wagh Polytechnic, Nashik **Date:** 15/12/2025
Academic Year: 2025-26 (EVEN)
Programme: Information Technology (IF) **Course: Programming in C (PIC)** **Course Code:** 312303
Semester: Second **Scheme:** K **Name of Faculty:** Ms. M. S. Karande
Class: FYIF-CRAY Batch: A/B/C

Sr. No	LLO	Practical Title	Planned Date	Performance Date	Remarks	Related self-learning (if any)
17.	LLO 21.1	* Develop C program using in-built mathematical and string functions.	A-06/03/2026 B-05/03/2026 C-10/03/2026	A- B- C-		
18.	LLO 22.1	*Write C program to demonstrate User defined Functions	A-12/03/2026 B-09/03/2026 C-13/03/2026	A- B- C-		
19.	LLO 23.1	Implement recursive functions in C program	A-13/03/2026 B-12/03/2026 C-17/03/2026	A- B- C-		
20.	LLO 24.1 LLO 24.2	* Write C Program to print addresses and values of variables using Pointer.	A-19/03/2026 B-16/03/2026 C-20/03/2026	A- B- C-		
21.	LLO 25.1	* Implement C Programs to perform arithmetic operations using Pointer.	A-20/03/2026 B-23/03/2026 C-24/03/2026	A- B- C-		
22.		**Demonstrate execution of graphic program in C	A-27/03/2026 B-30/03/2026 C-27/03/2026	A- B- C-		

** Content beyond Syllabus

ASSESSMENT METHODOLOGIES/TOOLS

A. Formative assessment (Assessment for Learning) (FA-TH)

- Continuous assessment based on process and product related performance indicators. Each practical will be assessed considering
  - 60% weightage is to process
  - 40% weightage to product

B. Summative Assessment (Assessment of Learning) (SA-TH)

- End semester examination, Lab performance, Viva voce

SUGGESTED MICRO PROJECT / ASSIGNMENT/ ACTIVITIES FOR SPECIFIC LEARNING /SKILLS DEVELOPMENT (SELF LEARNING)

Self-learning
1.Complete any one course related to Programming in C on Infosys Springboard
2.Develop C language code for relevant topics suggested by the teacher

Assignment
1.Solve an assignment on any relevant topic given by the teacher

Micro project
The micro project has to be Industry Application Based, Internet-based, Workshop-based, Laboratory-based or Field-based as suggested by Teacher

Maharashtra State Board of Technical Education, Mumbai

K2-A (PRACT)

LABORATORY PRACTICAL PLANNING

Institute Name: K. K. Wagh Polytechnic, Nashik **Date:** 15/12/2025
Academic Year: 2025-26 (EVEN)
Programme: Information Technology (IF) **Course: Programming in C (PIC)** **Course Code:** 312303
Semester: Second **Scheme:** K **Name of Faculty:** Ms. M. S. Karande
Class: FYIF-CRAY Batch: A/B/C

1. Prepare a simple calculator to perform mathematical operations. Accept values and operations to be performed from user. Allow only numeric values else show appropriate messages to user.
2. Prepare menu driven program for Invoice management system. Accept user inputs and generate receipt and calculate amounts as per purchased items.
3. Develop employee leave management system to display leave related information of employee.
4. Develop food menu card for restaurant. Display food items. Accept food menu, quantity and generate bill for the same.
5. Develop a menu-driven program to perform matrix operations - matrix addition, matrix multiplication, transpose of matrix .

Ms. M. S. Karande
(Name & Signature of Staff)

Ms. M. S. Karande
(Name & Signature of HOD)