

Syllabus and Lesson Plan

Course Title: C Programming

Course Duration: 30 days

Course Description: A 30 Day Curriculum is a structured program aimed at building a strong foundation in C language. With a daily breakdown, it covers crucial aspects such as introduction to C language, variables, data types, operators, and control statements. The curriculum progresses into functions, modular programming, arrays, pointers, structures, unions, file handling, and dynamic memory allocation. Emphasizing practical applications, this curriculum serves as a valuable resource for newcomers to grasp fundamental concepts and advance their programming skills within a 30-day timeframe.

Week 1-2: Foundations of C Programming (By Ms Madhuri Gupta)

1. **Day 1-2: Introduction to C Language**

- Basics, history, and importance.

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2. **Day 3-4: Variables, Data Types & Operators (By Ms Madhuri Gupta)**

- Understand variables, data types, and basic operators.
- Practical exercises.

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3. **Day 5-7: Control Statements (By Ms Madhuri Gupta)**

- Learn if, else, switch statements.
- Implement control flow in programs.

4. **Day 8-10: Functions and Modular Programming (By Ms Madhuri Gupta)**

- Define and use functions.
- Modular programming concepts.

Week 3-4: Intermediate C Programming (By Mrs. K Vibhuti)

5. **Day 11-14: Arrays and Pointers**

- Understand arrays and pointers.
- Practical applications.

6. **Day 15-18: Structures and Unions (By Mrs. K Vibhuti)**

- Introduction to structures and unions.
- Implement basic data structures.

7. **Day 19-21: File Handling (By Mrs. K Vibhuti)**

- Read and write files in C.
- File manipulation techniques.

8. **Day 22-24: Dynamic Memory Allocation (By Mrs. Thaneshwari Sahu)**

- Memory management with malloc, calloc, free.
- Avoid memory leaks.

Week 5-6: Application and Practice (By Mrs. Thaneshwari Sahu)

9. **Day 25-28: C Programming Examples**

- Solve real-world problems with C.

10. **Day 29-30: Final Project (By Mrs. Thaneshwari Sahu)**

- Apply learned concepts to a mini-project.

Reference Books:

Yashavant Kanetkar:

- Known for books like "Let Us C" which is widely used for learning C programming.
- [Let Us C by Yashavant Kanetkar](#)

V. Rajaraman:

- Author of books like "Analog Computation and Simulation" and "Computer Programming in COBOL."
- [Books by V. Rajaraman](#)

C programming is "C Programming Absolute Beginner's Guide" by Perry and Miller

- Author: Perry and Miller
- Title: C Programming Absolute Beginner's Guide
- Publication: Que Publishing
- Edition: Latest available edition