C Language Syllabus

Introduction and First Program	**45 mins**
Why Programming	21 mins
History of C Language	10 mins
Hello World Program	14 mins
Variables and Data types	**50 mins**
Identifiers in C	10 mins
Variables and DataTypes	20 mins
Constants	20 mins
Console IO Operations	**48 mins**
Printf and Scanf	39 mins
Unformatted IO Functions	09 mins
Operators and Expressions	**70 mins**
Expressions and Arithmetic Operators	23 mins
Relational and Logical Operators	16 mins
Bitwise Operators	31 mins
Control Flow Statements	**209 mins**
If Statement	48 mins
Switch Statement	21 mins
Unconditional Branching using goto statement	11 mins
While Loop	63 mins
Do While Loop	07 mins
For Loop	33 mins
Break and Continue	13 mins
Special Cases	13 mins
Working with Functions	**83 mins**
Introduction and Writing Functions	34 mins
Scope of Variables,Storage Classes,Pass by Value and reference	35 mins
Recursion	14 mins
Working with Arrays	**89 mins**

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Arrays Declaration and Initialization	20 mins
Sample Programs using Arrays	23 mins
Arrays as Function Parameters	18 mins
2-Dimensional Array	28 mins

Pointers	**142 mins**
Introduction to Pointers	23 mins
Pointers as Function Parameter	17 mins
Pointer Arithmetic	06 mins
Pointers and Arrays	30 mins
Function Pointers	32 mins
Dynamic Memory Allocation using malloc	25 mins
calloc and comparision with malloc	09 mins

String Handling	**76 mins**
Introduction to Strings	13 mins
Sample Program	31 mins
More Sample Programs	09 mins
Standard String Library Functions	11 mins
Array of String	12 mins

Structures and Unions	**71 mins**
Declaring and Instantiating Structures	18 mins
Structure as Parameter and Pointer to Structure	15 mins
Enumerated Data Type	08 mins
Union	21 mins
Bit Fields	09 mins

File Handling	**70 mins**
What is a Stream	18 mins
File Handling-Writing and Reading Characters	17 mins
Writing and Reading Structure in Text Format	14 mins
Writing and Reading in Binary Format	21 mins

Pre-Processor Directives	**42 mins**
Understanding Pre-Processor directives	23 mins
Header Files and Project	19 mins

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Command Line Arguments and Variable Arguments	**20 mins**
Command Line Argument	09 mins
Variable Number of Arguments	11 mins
Searching and Sorting	**157 mins**
Linear Search	19 mins
Iterative Binary Search	19 mins
Recursive Binary Search	10 mins
Bubble Sort	21 mins
Selection Sort	16 mins
Insertion Sort	17 mins
Quick Sort	30 mins
Merge Sort	25 mins
Stack	**105 mins**
Introduction to Data Structures	09 mins
Stack Using Arrays	26 mins
Stack Using Linked List	27 mins
Infix to Postfix Expressions	43 mins
Queue	**41 mins**
Queue Using Arrays	24 mins
Queue Using Linked List	17 mins
Linked List	**144 mins**
Introduction to Linked List	14 mins
Single Linked List	54 mins
Double Linked List	34 mins
Circular Linked List	42 mins
Trees	**116 mins**
Introduction to Trees	27 mins
Programming Tree - 1	51 mins
Programming Tree - 2	38 mins

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