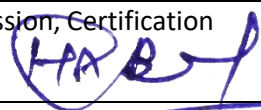


**SWARNIM STARTUP & INNOVATION UNIVERSITY**  
**SCHOOL OF SCIENCE**  
**VALUE ADDED COURSE (VAC)**  
**C-LANGUAGE CERTIFICATE COURSE - VACC**

Session	Topic	Content	Duration
1	Introduction to C Programming	History, Features, Setting up the environment, Writing your first C program	2 hours
2	Basic Syntax and Data Types	Syntax, Variables, Data Types, Constants, Keywords	2 hours
3	Operators and Expressions	Arithmetic, Relational, Logical, Bitwise, Assignment, and Misc Operators	2 hours
4	Control Structures	If statements, Switch-case, Loops (for, while, do-while)	3 hours
5	Functions	Definition, Declaration, Function prototypes, Parameter passing, Recursion	3 hours
6	Arrays	Single-dimensional, Multi-dimensional arrays, Array manipulation	3 hours
7	Pointers	Introduction to pointers, Pointer arithmetic, Pointers and arrays, Pointers to functions	3 hours
8	Strings	String handling functions, Array of strings	2 hours
9	Structures and Unions	Definition, Declaration, Accessing members, Nested structures, Unions	3 hours
10	File Handling	File operations (read, write, append), File pointers, File handling functions	3 hours
11	Dynamic Memory Allocation	malloc, calloc, realloc, free, Handling dynamic arrays	2 hours
12	Preprocessors	Macros, File inclusion, Conditional compilation	2 hours
13	Debugging and Error Handling	Common errors, Debugging techniques, Error handling	1 hour
14	Project and Assessment	Building a project using C, Practical assessment	2 hours
15	Review and Closing	Review of key concepts, Q&A session, Certification distribution	1 hour
Total			30 hours



  
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SCHOOL OF SCIENCE

VALUE ADDED COURSE (VAC)

C-LANGUAGE CERTIFICATE COURSE - VACC

- This curriculum provides a comprehensive overview of essential topics for a 30-hour C-Language Certificate Course, balancing theoretical knowledge and practical application.



  
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