

PROGRAMMING IN C AND C++

Semester	Subject Code	Category	Lecture Hrs		Theory Hrs		Practical		Credits
			Per week	Per Sem	Per week	Per Sem	Per week	Per Sem	
III		Core Theory - III	4	60	4	60	0	0	4

COURSE OBJECTIVE

- This course helps Students will be able to develop logics to create programs, applications in C. Also by learning the basic programming constructs they can easily switch over to any other language in future.
- To learn the syntax and semantics of the C++ programming language.
- To learn how to design OOPs concept in C++.

COURSE OUTCOME

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	To learn the basic of concept of C and its structures.	K1
CO2	To develop the programming concept of C.	K2
CO3	Learn about the Object Oriented Concept	K1
CO4	To Understand the Concept of Inheritance and Exception Handling	K2
CO5	To develop the programs related to polymorphism and file concept.	K3

Knowledge Level – K1-Remember, K2- Understand, K3-Apply, K4-Analyze

MAPPING WITH PROGRAMME OUTCOME

COS	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO1	S	S	S	M	S	S
CO2	S	S	M	S	S	S
CO3	S	S	M	M	S	S
CO4	S	S	S	S	M	S
CO5	S	S	M	S	S	M

S-Strong

M-Medium

L-Low

SYLLABUS

UNIT I PROGRAMMING IN C INTRODUCTION

11 Hrs

C Fundamentals – Character Set – Identifier and Keywords – Data types – Constants – Variables – Declarations – Expressions and Statements – Operators and its types -Pointer -Structure and Union.

UNIT II FUNCTION AND CONTROL STRUCTURE IN C **12 Hrs**

Data Input/Output functions – C Program Basics– Control Statements – Function : Definition, Prototypes, Passing Arguments– Recursions – Storage Classes.

UNIT-III OOPS CONCEPT IN C++ **12 Hrs**

Principles Concept of Object Oriented Programming (OOP)
– Benefits and Applications of OOP –Features of OOPs-
Classes and Objects – Constructors and Destructors

UNIT-IV INHERITANCE AND EXCEPTION HANDLING IN C++**12 Hrs**

Inheritance- Types of Inheritance- Single , Multiple, Multilevel, Hybrid Inheritance- Inline Functions – Final Class- Nested Class- Abstract Class – Exception Handling.

UNIT-V POLYMORPHISM AND FILE CONCEPT IN C++ **13 Hrs**

Polymorphism– Function Overloading – Operator Overloading- Friend and Virtual Functions – File concept

Distributions of Marks: Theory: 80% Applications: 20%

TEXT BOOK

S.No	Authors	Title	Publishers	Year of Publication
1.	Kamthane Ashok.N	Programming in C	Pearson Education ltd	2 nd Edition

REFERENCE BOOK

S.No	Authors	Title	Publishers	Year of Publication
1.	Yashvant P. Kanetkar	“Let us C”,	Infinity science e press.	8 th Edition
2.	Balagurusamy .E	Programming in ANSI C	Tata McGraw Hill	Second Edition
3.	Bjarne Stroustrup	The C++Programming Language	Addison- Wesley	1985
4.	Herbert Schildt	C++ :The Complete Reference	Tata Mc Graw- Hill Publishing Company	2003
5.	Richard Grimes	Beginning C++ Programming	Packt Publishing	2017
6.	Stenley B Lippman, JoseeLajore, Barbara EMoo	C++ Primer	Pearson Education	2008

7.	Scott Mayer	Effective C++	Addison- Wesley Professional Computing Series	2014
8.	Brian W.Kernigh an Dennis M.Ritchie	The C Programming Language	Prentice Hall	1998

WEB RESOURCES

1. <https://www.tutorialspoint.com/cprogramming/index.htm>
2. <https://www.javatpoint.com/cpp-tutorial>

TEACHING METHODOLOGY

- Class room teaching
- Group discussions
- Seminars
- Chart/Assignment
- Simulation Model
- Smart Class room

SYLLABUS DESIGNERS

1. Mrs.B.Arulmozhi, Assistant Professor and Head, Department of Computer science
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3. Ms. P. Ramya, Assistant Professor, Department of Computer Science