

**SARDAR PATEL UNIVERSITY**  
**Vallabh Vidyanagar, Gujarat**  
**(Reaccredited with 'A' Grade by NAAC (CGPA 3.11))**  
**Syllabus as per NEP 2020 with effect from the Academic Year 2024-2025**

**Bachelor of Business Administration (Information System Management)**  
**BBA (ISM) - Semester-III**

Course Code	<b>UM03MABBS02</b>	Title of the Course	C++
Total Credits of the Course	4	Hours per Week	4

Course Objectives:	<p>To introduce basic programming concepts and necessary constructs of the C++ programming language.</p> <p>To understand the fundamental concepts of object-oriented programming using C++.</p> <p>To describe exception handling and Input Output Management.</p>
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Course Content		
Unit	Description	Weightage* (%)
1.	<p>Object Oriented Programming (OOP) Concepts and Introduction to C++</p> <ul style="list-style-type: none"> <li>• Structured programming vs. object-oriented programming.</li> <li>• Basic OOP concepts: objects, classes, encapsulation, data hiding, inheritance, polymorphism.</li> <li>• Introduction to C++: structure of a C++ program, data types, variables, constants, expressions, statements, and operators.</li> <li>• Usage of header files</li> </ul>	25%
2.	<p>Control flow statements and Input/output</p> <ul style="list-style-type: none"> <li>• Control flow statements: if else, for loop, while loop, do while loop, switch, break and continue.</li> <li>• Basic I/O in C++.</li> </ul>	25%
3.	<p>Arrays and Working with Classes</p> <ul style="list-style-type: none"> <li>• Arrays in C++: introduction, declaration, initialization of one , two and multi-dimensional arrays, operations on arrays .</li> <li>• Working with strings : introduction, declaration, string manipulation and arrays of string []</li> <li>• Classes and objects in C++</li> <li>• Constructors : default, parameterized, copy, constructor overloading and destructor</li> <li>• Access specifiers, implementing and accessing class members.</li> <li>• Working with objects : constant objects, nameless objects, live objects, arrays of objects</li> </ul>	25%

4.	<p>Functions, Function Overloading and Inheritance</p> <ul style="list-style-type: none"> <li>• Introduction to functions, library and user-defined functions, parameters passing, default arguments. Functions overloading, inline functions, friend functions and virtual functions.</li> <li>• Introduction, derived class declaration, forms of inheritance Inheritance and member access ability, constructor and destructor in derived class, construction invocation and data member initialization</li> </ul>	25%
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Teaching-Learning Methodology	Information and Communication Technology (ICT) in education is the mode of education that use information and communications technology to support, enhance, and optimize the delivery of information.
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**Evaluation Pattern As per Sardar Patel University Letter :(E-3/2384) (06/01/2024)**

Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	50%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	
3.	University Examination (Theory-50% and Practicals-50%)	50%

Course Outcomes: Having completed this course, the learner will be able to

1.	E Balagurusamy : Object Oriented Programming in C++, Tata McGraw-Hill Publishing Co. Ltd.
2.	Robert Lafore : Object Oriented Programming in Turbo C++, Guide, Galgotia Pub. (P) Ltd.Books

Suggested References:

Sr.No.	References
1.	Barkakati N. : Object Oriented Programming in C++, PHI.
2.	OOP's using C++ for Dummies.

On-line resources to be used if available as reference material

On-line Resources

1.

2.

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