

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>1153IT203</b>	<b>C++ Programming Fundamentals</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>3</b>

### **UNIT I**

Object Oriented Programming Concepts – Objects – Classes – Methods And Messages – Abstraction and Encapsulation – Inheritance – Abstract Classes – Polymorphism - Applications of OOP - Introduction to C++ – Classes – Access Specifiers – Function and Data Members – Default Arguments – Function Overloading – Friend Functions – Static Members – Objects – Nested Classes

### **UNIT II**

Constructors – Default constructor – Parameterized constructors – Constructor with dynamic allocation – Copy constructor – Destructors – Operator overloading – Unary operator overloading – Binary operator overloading - Overloading the assignment operator

### **UNIT III**

Inheritance – public, private, and protected derivations – Multiple Inheritance - Virtual Base Class – Abstract Class

### **UNIT IV**

Exception handling – Try-Catch-Throw paradigm – Exception Specification – Terminate and Unexpected Functions – Uncaught Exception.

### **UNIT V**

Runtime polymorphism – virtual functions – pure virtual functions – I/O operations – Formatted I/O operations – Unformatted I/O operations – Manipulators - File handling

#### **i.Text Books :**

1. B. Trivedi, “Programming with ANSI C++”, Oxford University Press, 2012

#### **ii.Reference:**

1. Goran Svenk, “Object-oriented Programming: Using C++ for Engineering and Technology” Second Edition 2003.
2. Balagurusamy, “Object-oriented Programming with C++” Tata McGraw-Hill Education, Fourth Edition 2008
3. Ira Pohl, “Object Oriented Programming using C++”, Pearson Education, Second Edition Reprint 2004.
4. B. Lippman, Josee Lajoie, Barbara E. Moo, “C++ Primer”, Fourth Edition, Pearson Education, 2005.