

**Open Course Title:** OOP concept using C++

**Target Students from Branches:** ECE/TCE/EEE/CSE/Mech/Civil/MCA

**Prerequisites:** A student wishing to take this course must be proficient with advanced C. The specific topics the student would need to have mastered include: arrays, structures, pointers, dynamic memory management, writing multi-file programs, and data structures.

**Total duration of the course:** 25 Hours.

**No. of Lecture hours:** 3X5 = 15

**No. of hands on / Practical :** 2.5 X 5 = 12.5

### **Abstract**

Most commercial-grade software development these days is based on object-oriented methods and the most frequently used language for OO programming is C++. It is therefore important that our engineering students be well conversant with this language. Since C++ was born out of C, they have much in common at the level of basic language structures. This course takes advantage of this fact and teaches C++ programming language together by comparing and contrasting them at all levels --- from basic language constructs to the constructs needed for application development.

### **Open Course Details**

A student who successfully fulfills the course requirements will have demonstrated:

**CO1:** an ability to explain the object-oriented concepts in C++.

**CO2:** an ability to demonstrate the use of various OOPs concepts with the help of C++ programs.

**CO3:** an ability to write object-oriented programs of moderate complexity in C++.

**Note:** The coordinators shall provide at least three course outcomes for the open course.

### **Schedule**

<b>Day 1:12/02/2019</b>			
<b>Time</b>	<b>Topics</b>	<b>Resource Person Details</b>	<b>CO-PO Mapping</b>
9:00 – 10:30	Migration from C to C++	Dr. Mahesh .G/Dr. Satish Kumar .T	CO1, CO2
1:30 – 3:00	Variables in C++	Dr. Mahesh .G/Dr. Satish Kumar .T	CO1, CO2
<b>Day 2:13/02/2019</b>			
<b>Time</b>	<b>Topics</b>	<b>Resource Person Details</b>	<b>CO-PO Mapping</b>
9:00 – 10:30	Functions in C++	Dr. Mahesh .G/Dr. Satish Kumar .T	CO1, CO2
1:30 – 3:00	Classes and Objects	Dr. Mahesh .G/Dr. Satish	CO1, CO2

		Kumar .T	
<b>Day 3:14/02/2019</b>			
<b>Time</b>	<b>Topics</b>	<b>Resource Person Details</b>	<b>CO-PO Mapping</b>
9:00 – 10:30	Constructors and Destructors	Dr. Mahesh .G/Dr. Satish Kumar .T	CO1, CO2
1:30 – 3:00	Operator overloading	Dr. Mahesh .G/Dr. Satish Kumar .T	CO1, CO2
<b>Day 4:15/02/2019</b>			
<b>Time</b>	<b>Topics</b>	<b>Resource Person Details</b>	<b>CO-PO Mapping</b>
9:00 – 10:30	Inheritance	Dr. Mahesh .G/Dr. Satish Kumar .T	CO2, CO3
1:30 – 3:00	Virtual Functions	Dr. Mahesh .G/Dr. Satish Kumar .T	CO2, CO3
<b>Day 4:16/02/2019</b>			
<b>Time</b>	<b>Topics</b>	<b>Resource Person Details</b>	<b>CO-PO Mapping</b>
9:00 – 10:30	Exceptional Handling	Dr. Mahesh .G/Dr. Satish Kumar .T	CO2, CO3
1:30 – 3:00	Templates	Dr. Mahesh .G/Dr. Satish Kumar .T	CO2, CO3

Note: 11:00-12:30 & 3:30 -4:30 pm Practicals.