



**Dempo Charities Trust's
DHEMPE COLLEGE OF ARTS & SCIENCE
Miramar, Panaji-Goa**

C++

[2 Credits 30 hours]

Course Objective:

C++ is an object oriented programming (oop) language. Students will learn concepts of object oriented programming over procedure oriented programming. Concepts like data encapsulation, data security, polymorphism, inheritance, template classes, exception handling, defining classes and objects will be covered in detail with corresponding examples using C++ programming language.

Learning Outcome:

Students will learn to design and implement object oriented systems in C++.

Course Content

1. Principles of OOP: Software crises, evolution, Procedure oriented vs object oriented paradigm, Basic concepts of OOP, Benefits and applications of OOP (2)
2. Beginning with C++: A simple c++ program, an example with class, structure of a c++ program, compiling and linking (2)
3. Tokens, expressions and control structures: Tokens, keywords, identifiers and constants, basic datatypes, operators, scope resolution operator, memory management operators, operator overloading (4)
4. Functions in C++: Main function, function prototyping, call by reference, inline functions, function overloading, friend and virtual functions (4)
5. Classes and objects: Specifying a class, defining member functions, private and public member functions, static member functions, friend functions, pointers to members (4)
6. Constructors and destructors: Constructors-default, parameterised, copy, constructor overloading, destructors (4)
7. Inheritance: Introduction, derived classes, single, multiple, multilevel, hierarchical, hybrid, virtual functions and classes, abstract classes (5)
8. Pointers, virtual functions and polymorphism: pointers, virtual functions (2)
9. Templates: Class template, function template, overloading templates (2)
10. Exception handling: Basics of exception handling, Try catch throw block (1)

Reference

I.E Balagurusamy, Object oriented programming in C++

Dr. Shilpa Naik

Dempo Charities Trust
Dhempe College of Arts & Science
 Miramar - Goa.

Academic Year : 2017 - 18

SHORT TERM COURSE ATTENDANCE SHEET

Name of the Course : **C++**
 Class : **S.Y.B.Sc.**

Topic : **C++**
 Batch : **S4B.Sc. Comp Sci**

Lecture No.	1	2	3	4	5	6	7	8	9	10
Date:	1-8-17	2-7-17	7-7-17	8-7-17	9-7-17	10-7-17	11-7-17	12-7-17	13-7-17	14-7-17
Time:	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11	9-11
Roll no.	Name of Student									
16221										
16223	Aruny Pinto	Present	Present	Present	Present	Present	Present	Present	Present	Present
16225	Amila Chavan	Present	Present	Present	Present	Present	Present	Present	Present	Present
16226	Prarthana Dinkar	Present	Present	Present	Present	Present	Present	Present	Present	Present
16232	Nehal Parner	Present	Present	Present	Present	Present	Present	Present	Present	Present
16234	Ranga Nank	Present	Present	Present	Present	Present	Present	Present	Present	Present
16236	Savraj Harasalkar	Present	Present	Present	Present	Present	Present	Present	Present	Present
16237	Siddhant Patil	Present	Present	Present	Present	Present	Present	Present	Present	Present
16240	Franklin Fernandes	Present	Present	Present	Present	Present	Present	Present	Present	Present
16241	Rajesh Ghanskar	Present	Present	Present	Present	Present	Present	Present	Present	Present
16242	Bhaskar Naik	Present	Present	Present	Present	Present	Present	Present	Present	Present
16243	Sd. Shilpa	Present	Present	Present	Present	Present	Present	Present	Present	Present
16244	Roshelle Martins	Present	Present	Present	Present	Present	Present	Present	Present	Present
16245	Chitara Marathe	Present	Present	Present	Present	Present	Present	Present	Present	Present
16246	Arkar Narkani	Present	Present	Present	Present	Present	Present	Present	Present	Present
16248	Sawani Afzalpuskas	Present	Present	Present	Present	Present	Present	Present	Present	Present
16251	Shamini Naik	Present	Present	Present	Present	Present	Present	Present	Present	Present

Shilpa
 Ms Shilpa Naik

Shilpa
 Ms Shilpa Naik
 Incharge Comp Sci

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Academic Year : 2017 - 18

SHORT TERM COURSE ATTENDANCE SHEET

Name of the Course : **C++**
 Class :- **S.Y.B.Sc.**

Topic : C++
 Batch : S.Y.B.Sc. Comp Sci.

Lecture No.	1	2	3	4	5	6	7	8	9	10
Date:-	30/7	31/7	7/8	8/8	14/8	15/8	21/8	22/8	28/8	29/8
Time:-	9-10-11	9-10-11	9-10-11	9-10-11	9-10-11	9-10-11	9-10-11	9-10-11	9-10-11	9-10-11
Roll no.	Name of Student									
16221	Anson Pires									
16223	Amey Bhabe									
16225	Savita Chavara									
16226	Prasthana Dinkott									
16232	Nehal Panicker									
16234	Rissa Naik									
16236	Sauraj Hasmalkar									
16237	Siddhant Bhatnagar									
16240	Franis Co Ides									
16241	Rishiki Ghoshkar									
16242	Bhaskar Naik									
16243	Sak Shinde									
16244	Rockelle Martins									
16245	Chetana Morathe									
16246	Ankur Narkhari									
16248	Sowari Afzulwartha									
16251	Shawari Naik									

Name & Signature of the Teacher

[Signature]
 Ms. Shilpa Naik

HOD

[Signature]
 Ms. Shilpa Naik
 Incharge Comp Sci



Dempo Charities Trust's
DHEMPE COLLEGE OF ARTS & SCIENCE
Miramar, Panaji-Goa

Report of C++ 2017-18

Name: C++

Class: TYBSc Computer Science

Number of Students: 17

Fees charged: Rs 1000 per student

Duration: 40 hours.

Aim: This course introduces the student to object-oriented programming through a study of the concepts of program specification and design and coding.

Conducted from: 1st July 2017 to 29th August 2018

Instructor: Mrs Shilpa Naik