VIDHYADEEP UNIVERSITY
Holy Flame of Knowledge

FIRST-YEAR DIPLOMA ENGINEERING SYLLABUS

Semester: 2nd

Course Code:002204207 **Type of Course: PCC-LC-4**

Course Name: BASIC OBJECT ORIENTED PROGRAMMING LAB

Course Prerequisites: Basic knowledge of **Basic Object Oriented Programming**

COURSE OBJECTIVE(S):

This course intends to teach the students about basic concepts of Object-Oriented Programming (OOP) and C++. Large programs are probably the most complicated entities ever created by humans. Because of this complexity, programs are prone to error and software errors can be expensive and even life- threatening. Object-oriented programming offers a new and powerful way to cope with this complexity and act as the backbone to all other courses that are based on Object Oriented concept. Therefore, by learning this course sincerely the students will be able to develop programs in 'C++' using Object Oriented Programming Concepts.

TEACHING & EXAMINATION SCHEME:

Teaching Scheme (Hrs/Week)				Examination Scheme					
Theory	Tutorial	Practical	Credit	SEE		CA			Total
				Th	Pr	MSE	PLE	LA	
0	0	4	2	00	25	00	00	25	50

Th: Theory; Pr: Practical; FA: Final Assessment; CAT: Continuous Assessment Theory; CAP: Continuous Assessment Practical;

*TOTAL Practical Hours: No. of Practical Hrs/Week*15 = 60*

LIST OF PRACTICALS: *(sample for 2 hrs/week)*15 weeks*

Sr. No.	PracticalOutcomes(PrOs)	Unit No.	Approx.Hrs. required
1	Create your account on GitHub and save simple C++ program in GitHub.	I	02
2	Develop minimum 5 programs using cin and cout.	I	02
3	Develop programs using scope resolution operator, simple manipulators ,and enumeration.	I	02
4	Develop programs using call by reference and return by reference, default arguments, constant arguments, inline and Function overloading.	II	06
5	Develop programs using structures.	II	02

6	Define minimum 5 different classes such as student, distance, shape, employee, account, inventory, vector, movie-ticket booking, time, point, etc. with data member & member functions. Also Develop programs to test those classes functionality.	II	10
7	DevelopProgramsusingarrayofobjectsandstaticmember function	II	04
8	Developprogramstopassobjectasanargumentand Returningobject.	II	04
9	DevelopprogramsusingfriendfunctionandFriendclass.	II	04
10	Applythe concepts ofconstructorsanddestructorsinthe Programs developedinunit-2andtestthoseprograms.	III	06
11	Developprogramsusingsingle,multilevel,multiple Inheritance.	IV	06
12	DevelopprogramsusingConstructorsinbaseandderiveclasses.	IV	02
13	Developaprogramtoshowuseofthis pointer.	V	02
14	Developaprogramusingruntimepolymorphism.	V	02
15	Developatleast2programsusingfileoperations.	V	02
	Total		**56**

Text Book(s):

Title of the Book	Author(s)	Publication
Basic Object Oriented Programming	M T Savaliya	Atul prakashan

Reference Book(s):

Sr. No.	TitleofBook	Author	Publication with place, year andISBN
1	Object OrientedProgrammingin C++	Lafore,Robert	SAMS,2012
2	ObjectOriented ProgrammingwithC++	Balagurusamy,E.	McGrawHill,Delhi,2012
3	Object OrientedProgrammingwithC++-s econdedition	Sahay,Sourav	Oxford,Delhi 2012
4	MasteringC++	Venugopal	TataMcGrawHill,Delhi,2011
5	Programminginc++	Kamthane,Ashok	Pearson,NewDelhi,2012

6	C++An Introductionto Programming	JesseLiberty, JimKeogh	Prentice-Hall,India
7	TheCompleteReference C++	HerbertSchildt	TataMcGraw-Hill

Web Material Link(s):

a) https://snap.berkeley.edu/snap/snap.html
b) https://scratch.mit.edu/download/scratch2
c) https://nptel.ac.in/courses/106/105/106105151/
d) https://www.programiz.com/cpp-programming
e) https://www.codecademy.com/learn/learn-c-plus-plus
f) https://www.tutorialspoint.com
g) www.w3schoolscom
h) https://www.udemy.com/topic/c-plus-plus/
i) https://www.udacity.com/course/c-for-programmers--ud210

Equivalent/Corresponding Course on NPTEL (SWAYAM):

NPTEL course on

https://onlinecourses.nptel.ac.in/noc21_cs02/preview

https://nptel.ac.in/courses/106/105/106105151/

COURSE EVALUATION:

Sr. No.	Activity	Marks	Weightage
1	Semester End Examination (External Th)	60	60%
2	Internal Examination	40	40%
2(a)	Mid Semester Examination	20	
2(b)	Attendance	10	
2(c)	Assessment Types (Any One from 2(c).1 to 2(c).7)	10	
2(c).1	Subject (Course) based Mini-Project		
2(c).2	Industry/Site Visit & Report		
2(c).3	Assignment		
2(c).4	Seminar		
2(c).5	Case Study		
2(c).6	Surprise Class Quiz		
2(c).7	Design Exercise		
2(c).7	Presentation		
2(d)	Practical (if Applicable)		

* For 4 Credit Subjects

1 Credit = 25 Marks
Theory: 3 Credits = 75 Marks

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Practicals: 1 Credit = 25 Marks
SEE Evaluation will be of 100 marks and converted to 50 Marks (75 Th + 25 Pr)
CA Evaluation will be of 100 Marks and converted to 50 Marks. (75 Th + 25 Pr)

Distribution of Marks for Theory Evaluation as per Bloom's Taxonomy Level:

Level	Remember	Understand	Apply	Analyse	Evaluate	Create
% Weightage	20%	10%	10%	15%	10%	20%

COURSE OUTCOMES:*(in the range of 4 to 6)*

Sr. No.	CO Statement
CO-1	Selectproceduralorientedandobject-orientedapproachtosolvegivenproblem.
CO-2	Implement object-oriented program using constructor and destructor.
CO-3	Implement Inheritance for code reuse in C++ program.
CO-4	Develop program using runtime polymorphism.