



**FIRST-YEAR DIPLOMA ENGINEERING SYLLABUS**

Semester: 1st

Course Code:002204104

Type of Course: PCC-LC-1

Course Name: BASIC COMPUTER PROGRAMMING-LAB

Course Prerequisites:Basic knowledge of Basic Computer Programming

**COURSE OBJECTIVE(S):**

Use goggle applications, various IT software tools for word-processing, data analysis and preparing presentation

**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.	Content	Unit No.	Time Duration
1	PracticeusingVisualProgrammingLanguagelikescratch	I	02
2	DesignandtestsampleCprogramstodisplayamessageonscreen.	II	01
3	Designandtestminimum3 Cprogramsusingconstants,variablesanddata types.	II	02
4	DesignandtestaCprogramtoswap2numbersusingathirdvariableandwith out usingathirdvariable.	II	01
5	DesignandtestaCprogramtocomputevolumeandsurfaceareaofasphere.	II	01
6	DesignandtestaCprogramtoconverttemperatureinFahrenheittoCelsiusa ndviceversa.	II	01
7	Designandtestatleast4Cprogramstousingenlistedoperators: (1)Assignment(2)Arithmetic(3)Relational(4)Logical	II	02
8	Design andtestatleast5Cprogramsusingtheenlistedoperators: (1) Bitwise (2) Increment and Decrement (3) Conditional (4)Comma(5)sizeof	II	02



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9	Design and test at least 3 C programs to test the operator precedence and their associativity, implicit and explicit type conversion.	II	02
10	Design and test at least 3 C programs to show formatted and unformatted input and output.	II	02
11	Design and test at least 2 C programs using decision making statements: (1) Simple if (2) if...else (3) Nested if (4) if...else ladder (5) switch (6) goto	III	03
12	Design and test at least 3 C programs using the for loop.	III	02
13	Design and test at least 3 C programs using the while loop.	III	02
14	Design and test at least 3 C programs using do...while loop.	III	02
15	Design and test a C program using break and continue statements.	III	01
16	Design and test at least 5 pattern programs using loop structures.	III	03
17	Design and test at least 5 C programs using one dimensional array.	IV	02
18	Design and test at least 3 C programs using two dimensional arrays.	IV	02
19	Design and test at least 3 C programs using strings.	IV	02
20	Design and test at least 3 C programs using pointers.	IV	02
21	Design and test a C program using the concept of pointer to pointer.	IV	01
22	Design and test at least 5 C programs using user defined functions.	V	04
23	Design and test at least 3 C programs by applying the recursion concept.	V	02
24	Design and test a C program to test various inbuilt string functions.	V	02
25	Design and test a C program to demonstrate various inbuilt math functions.	V	02
26	Design and test a C program to demonstrate storage classes.	V	02
27	Design and test a C program to demonstrate usage of enum and type set.	VI	02
28	Design and test at least 3 C programs on structures and unions.	VI	02
29	Design and test at least 2 C programs using file operations.	VI	02
	<b>Total</b>		<b>56</b>

**Text Book(s):**

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

**Reference Book(s):**

Title of the Book	Author(s)	Publication
Programming with ANSI and Turbo C	Ashok N. Kamthane	Pearson Education, New Delhi; 2008; ISBN: 978-8131704370
Programming in ANSI C	E. Balagurusamy	McGraw Hills



**FIRST-YEAR DIPLOMA ENGINEERING SYLLABUS**

		Education, New Delhi; 2019; ISBN: 978-9351343202
Let us 'C'	Yashavant Kanetkar	BPB Publication, New Delhi; 2020; ISBN: 978-9389845686
Introduction to C Programming	Reema Thareja	Oxford University Press, New Delhi; 2018; ISBN: 978-0199492282

**Web Material Link(s):**

- a) <https://snap.berkeley.edu/snap/snap.html>
- b) <https://scratch.mit.edu/download/scratch2>
- c) <http://nptel.ac.in/courses/!06105085/4>
- d) [www.w3schools.com](http://www.w3schools.com)
- e) [www.programiz.com/c-programming](http://www.programiz.com/c-programming)
- f) <https://www.codecademy.com/courses/getting-started-v2/0/1>
- g) <http://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-087-practical-programming-in-c-january-iap-2010/>
- h) <http://spoken-tutorial.org>

**Equivalent/Corresponding Course on NPTEL (SWAYAM):**

NPTEL course on

[https://onlinecourses.nptel.ac.in/noc21\\_cs02/preview](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		



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2(c).7	Presentation		
2(d)	Practical (if Applicable)		

\* For 4 Credit Subjects

1 Credit = 25 Marks

Theory: 3 Credits = 75 Marks

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	Design algorithm and flowchart for the given Problem.
CO-2	Develop C programs using control structures.
CO-3	Develop C programs using arrays and pointers.
CO-4	Implement user defined functions.
CO-5	Use structure and union in C programs.
CO-6	Implement file and I/O operations in C.