



FIRST-YEAR DIPLOMA ENGINEERING SYLLABUS

Semester: 1st

Course Code: 002204103

Type of Course: PCC-1

Course Name: BASIC COMPUTER PROGRAMMING

Course Prerequisites: Basic knowledge of Basic Computer Programming

COURSE OBJECTIVE(S):

The present era can be said a digital era. Nowadays almost in every walk of life there is application of digitization, atomization as well as connecting various gadgets, home appliances, human body etc. to each other. The core component which drives these tasks is a piece of code for the machine, known as a program. It is essential for the students to learn basic concepts and methodology to develop computer programs.

This first and introductory level Computer Programming Course is intended to develop logical thinking skills and programs using a popular structured programming language 'C'. The programming skills thus acquired can be used for developing programs for the scientific, research and business purposes.

TEACHING & EXAMINATION SCHEME:

Teaching Scheme (Hrs/Week)				Examination Scheme				
Theory	Tutorial	Practical	Credit	SEE		CA		
				Th	Pr	MSE	PLE	LA
3	0	0	3	60	00	20	20	00
							Total	
							100	

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

TOTAL Theory Hours: No. of Th. and Tut.Hrs/Week*15 = 45

COURSE CONTENT(S):

Unit No.	Content	Hours	Weightage (%)
1	<u>FlowchartAndAlgorithm</u> - Write Pseudo Code For The Given Problem Statements - Select Appropriate Flowchart Symbols To Represent Problem Solution Graphically - Write Algorithms For The Given Problem Statements. - Develop Flowchart For The Given Problem Statement - Develop Algorithm For The Given Problem Statement	07	20%
2	<u>BasicsOf'C'</u> - Comprehend General Structure Of 'C' Program - Choose Appropriate Operators Amongst C Operators To Form Expressions In C.	12	30%



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	● Write Simple C Programs Using Arithmetic Expressions ● Apply Different Format Strings For The Input And Output Using 'C' Statements.		
3	<u>Decision Statements And Control Structure</u> ● Develop Programs Using Decision Making If-Else Statement ● Develop Programs Using Decision Making Switch - Case Statement ● Develop Programs Using Unconditional Branching Go To Statements In 'C' Language. ● Develop C Programs Using Control Structure: For, While And Do-While ● Apply Break And Continue Statement Based On The Problem Statements In 'C' Language.	07	20%
4	<u>Array And Pointers</u> ● Develop Programs Using One Dimensional Arrays In 'C' Language. ● Write Programs Using Two Dimensional Arrays ● Write Programs To Demonstrate The Use Of Pointers In C Programs. ● Write Simple Programs To Demonstrate Use Of Strings	12	15%
5	<u>Functions</u> ● Write A Simple C Program To Declare, Define And Call A Function. ● Write C Programs Using Function With Arguments ● Write C Functions Using Call By Value And Call By Reference. ● Write C Programs Using Recursive Functions. ● Use Built-In Functions Of Math And String Library	07	15%
6	<u>Structure, Union And Files</u> ● Write A Simple C Program To Define, Declare And Access User Defined Structure ● Write A Simple C Program To Define, Declare And Access User Defined Union ● Develop A Program To Read From And Write Into Files Using 'C' Language ● Write A Simple Program To Demonstrate Use Of "ArrayOf Structures"		
	TOTAL	45	100%

Text Book(s):

Title of the Book	Author(s)	Publication
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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 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
- e) 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://nptel.ac.in/courses/106/105/106105151/>

COURSE EVALUATION:



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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

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 userdefined functions.
CO-5	Use structure and union in C programs.
CO-6	Implement file and I/O operations in C.