



C Language
C Language
[CORE COURSE]

Semester: I	Credits: 3	Subject Code: BC12003	Lectures: 48
--------------------	-------------------	------------------------------	---------------------

Course Outcomes:

At the end of this course the learner will be able to,

- Relate the basics of computer programming languages.
- Develop C programs on windows platform.
- Analyze the problem and find the logical solution by using C language.
- Remember various system defined function for string handling and I/O.
- Create programs, applications in C language and use them in solving various problems.

Unit 1: Introduction to C language	08
<ul style="list-style-type: none">• History• Basic structure of C Programming• Language fundamentals<ul style="list-style-type: none">○ Character set, tokens○ Keywords and identifiers○ Variables and data types• Operators<ul style="list-style-type: none">○ Types of operators○ Precedence and associativity○ Expression• Managing I/O operations<ul style="list-style-type: none">○ Console based I/O and related built-in I/O functions○ printf(), scanf()○ getch(), getchar()○ Formatted input and formatted output	

Unit 2: Control structure	08
<ul style="list-style-type: none">• Decision Making and Conditional statements<ul style="list-style-type: none">○ Introduction○ Decision making structure○ If statement○ If-else statement○ Nested if-else statement○ Conditional operator○ Switch statement	

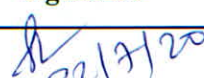
Board Of Studies	Name	Signature
Head of the Department	Asst. Prof. Smita Borkar	



<ul style="list-style-type: none">• Loop control structures<ul style="list-style-type: none">○ while loop○ Do-while loop○ For loop○ Nested for loop○ Jump statements○ break○ continue○ goto○ exit	
---	--

Unit 3: Arrays and Strings	12
<ul style="list-style-type: none">• Introduction to Array<ul style="list-style-type: none">○ Definition○ Declaration○ Initialization• Accessing and displaying array elements• Finding smallest and largest number from array• Reversing array• Introductions to Strings<ul style="list-style-type: none">○ Definition○ Declaration○ Initialization○ Standard library functions○ Implementations without standard library functions	

Unit 4: Functions and Pointer	10
<ul style="list-style-type: none">• Introduction<ul style="list-style-type: none">○ Purpose of function○ Function definition○ Function declaration○ Function call○ Types of functions○ Call by value and call by reference○ Storage classes• Introduction to pointer<ul style="list-style-type: none">○ Definition○ Declaration○ Initialization○ Indirection operator and address of operator○ Pointer arithmetic○ Dynamic memory allocation• Functions and pointers	

Board Of Studies	Name	Signature
Head of the Department	Asst. Prof. Smita Borkar	 22/7/20



Unit 5: Structure and Union	10
<ul style="list-style-type: none">• 5.1 Introduction to structure<ul style="list-style-type: none">○ Definition○ Declaration○ Accessing members○ structure operations○ nested structure• Union<ul style="list-style-type: none">○ Definition○ Declaration○ Accessing members	

#12 hours for Library work, assignments practical or field work

Recommended Text Books:


- Byron S Gottfried, *Programming with C*, McGraw Hill, 2018
- Kiran Gurbani, Vinaya Keshkar, *C Programming*, Himalaya Publication House, 2015
- Brian W. Kernighan, *The C Programming*, Pearson, 2015
- S.K. Srivastava, *C in Depth*, BPB Publication

Reference Books:

- Yashwant Kanetkar, *Let us C*, Abrams, M.H. A Glossary of Literary Terms. Prism: Bangalore; 2004., BPB publication;
- Balagurusamy, *Ansi C*, MC Graw Hill Education, 2017
- Yashwant Kanetkar, *Understanding Pointers in C*, BPB publication 2002.
- Herbert Schildt, *The Complete Reference C*, Tata McGraw-Hill publication 3rd edition 2008.





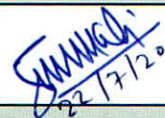

Websites:

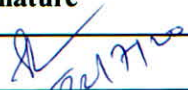
<https://www.tutorialspoint.com/>
www.w3schools.com
<https://www.studytonight.com/c/>

Board Of Studies	Name	Signature
Head of the Department	Asst. Prof. Smita Borkar	



St. Mira's College for Girls, Pune
(FYBBA(CA) 2020-2023)

Board Of Studies	Name	Signature	
Head of the Department	Asst. Prof. Smita Borkar		 22/7/20
Faculty*	Asst. Prof. Monika Rajguru	 22/7/20	
Faculty*	Asst. Prof. Divya Chitre		 22/7/20
Subject Expert (Outside SPPU)	Dr. Sagar Jambhorkar	 22/7/20	
Subject Expert (Outside SPPU)	Dr. Shankar Mali		 22/7/20
VC Nominee	Asst. Prof. Anjum Patel	 22/7/20	
Industry Expert	Mr. Sumit Singh Pal		
One Alumni***	Ms. Vidhi Thakkar		

Board Of Studies	Name	Signature
Head of the Department	Asst. Prof. Smita Borkar	 22/7/20