

**UkaTarsadia University**  
**Department of Commerce and Management**



**B.Com**  
**(Computer Applications)**

**CC 6 Programming in 'C'**  
**(030100315)**

**Semester - III**  
**Effective from June-2016**

**Syllabus Version: 1.01**

**Semester-III****CC 6 Programming in 'C'****Credits: 4 Theory****Contact Hours per Week: 4****Credits: 2 Practical****Contact Hours per Week: 4****Course Objective:**

To impart the knowledge of specification and structure of C programming language and to make the students compile, execute & debug a C program in a programming environment.

**Course Outcomes:**

The learners will be able to translate the program specification into the C language.

**Pedagogic Tools:**

Lectures, chalk and talk method, IT enabled audio-visual techniques, case analysis, field assignments, Computer Lab, etc.

<b>No.</b>	<b>Unit</b>	<b>Minimum No. of Contact Hours (Theory)</b>	<b>Minimum No. of Contact Hours (Practical)</b>	<b>Approx. Weight age %</b>
<b>1</b>	Programming Language and Overview of C	11	02	15
<b>2</b>	Decision Making, Branching, Looping Statement and Array	08	14	20
<b>3</b>	String and Functions	07	09	15
<b>4</b>	User Defined Functions	10	14	20
<b>5</b>	Structure and Unions	09	09	15
<b>6</b>	Pointers	07	04	15
	<b>Total</b>	<b>52</b>	<b>52</b>	<b>100</b>

<b>B.Com</b> (Computer Applications)	<b>Subject</b>	<b>Hours</b>
<b>Semester – III</b>	<b>(030100315) CC 6 Programming in ‘C’</b>	<b>4hrs/week (Theory) 4hrs/week (Practical)</b>
	<b>(Theory + Practical)</b>	<b>6 Credits</b>

<b>SECTION I</b>		
<b>Unit</b>	<b>Topics</b>	<b>Hours</b>
		<b>TH</b>
<b>Unit-1</b> [Weightage 15%]	<b>Programming Language and Overview of C</b>	<b>11</b>
	Introduction to Programming Language, Compiler, Interpreter, Linker, Assembler Algorithm, Flowchart, Structure of C Program, Tokens, Keywords, Identifiers, Constants, Variables, Data, Types of Operators and Expressions. Input and Output Functions in C.	
<b>Unit-2</b> [Weightage 20%]	<b>Decision Making, Branching, Looping Statement and Array</b>	<b>08</b>
	Decision Statement – IF-ELSE Statement and Nested IF Statement, Break, Continue, Goto, Switch() Case, While Loop, Do-While Loop, For Loop, Nested Loops, Definition - Types of Arrays - One-Dimensional Array ,Two Dimensional Array & Multi-Dimensional Array, Declaration and Initialization of Arrays.	
<b>Unit-3</b> [Weightage 15%]	<b>String and Functions</b>	<b>07</b>
	Introduction to String literals, Working with String and Characters, Declaration and Initialization of String Variables, Reading and Writing Strings, String Handling Functions, Types of Storage Classes, Scope, Visibility and Lifetime of Variables Rules.	

<b>SECTION - II</b>		
<b>Unit</b>	<b>Topics</b>	<b>Hours</b>
		<b>TH</b>
<b>Unit-4</b> [Weightage 20%]	<b>User Defined Functions</b>	<b>10</b>
	User defined Function – Declaration and Prototype, Elements of User-Defined Functions, Return Values and its Types, Types of Functions ,Function Call and Function Declaration , Call by Value and Reference, Function with Operators ,Function with Decision	

	Statements , Function with Arrays , Recursion.	
<b>Unit-5</b> <b>[Weightage 15%]</b>	<b>Structure and Unions</b>	<b>09</b>
	Declaration and Initialization of Structure, Defining Structure, Accessing Structure Elements, How Structure Elements are Stored, Structure within Structure, Array of Structure, Pointers to Structure, Unions.	
<b>Unit-6</b> <b>[Weightage 15%]</b>	<b>Pointers</b>	<b>07</b>
	Introduction to Pointers and its Features, Declaration and Initialization of Pointers, Arithmetic Operations using Pointers, Pointers and Function arguments, Array of Pointers, Pointers to Pointers.	

**Text Book:**

1. Balagurusamy, E. *Programming in ANSI C*. New Delhi: Tata McGraw Hill Publishing. Company Ltd, 2011.

**Reference Books:**

1. Kanetkar, Yashwant. *Let us C*. New Delhi: BPB Publications, 2010.
2. Kernigham, Brian W and Dennis M Richie. *C Programming Language*. New Delhi: Prentice-Hall of India Pvt Ltd, 1988.
3. Schildt, Herbert. *C Complete Reference*. New Delhi: Tata McGraw-Hill Publishing Company Ltd, 2004.