



# GUJARAT UNIVERSITY

## BCA I SYLLABUS

<b>COURSE TITLE</b>	<b>Introduction to Programming Language using C</b>
<b>COURSE CODE</b>	<b>CC-102</b>
<b>COURSE CREDIT</b>	<b>3</b>
<b>Session Per Week</b>	<b>4</b>
<b>Total Teaching Hours</b>	<b>40 HOURS</b>

### LEARNING OUTCOMES

On the completion of the course students will be able to:

1. To create their own logic and implement using C Programming.
2. To understand how to use programming in day to day application.

### DETAIL SYLLABUS

UNIT	TOPIC / SUB TOPIC	TEACHING HOURS
1	<b>PreProgramming Techniques</b>	<b>10 hours</b>
	<ul style="list-style-type: none"><li>• <b>Introduction to Programming Languages</b><ul style="list-style-type: none"><li>o Introduction to Machine level language</li><li>o Introduction to Assembly language</li><li>o Introduction to Higher level language</li><li>o Limitations and Features.</li><li>o Classification of Computer Language- Procedural Language and Non Procedural Language.</li></ul></li></ul>	2 hrs
	<ul style="list-style-type: none"><li>• <b>Tools and Techniques of Problem Analysis</b><ul style="list-style-type: none"><li>o Algorithm Development and FlowChart</li><li>o Numerous Examples in Algorithm Development and FlowChart</li></ul></li></ul>	2 hrs
	<ul style="list-style-type: none"><li>• <b>Getting Started With 'C' Language</b><ul style="list-style-type: none"><li>o Basic Structure of C</li><li>o Executing C program</li><li>o Character set &amp; C Tokens</li><li>o Identifiers &amp; Keywords</li><li>o DataTypes</li><li>o Constants and Variables</li><li>o Type Casting</li><li>o Comments</li></ul></li></ul>	6 hrs
2	<b>C Language Operators and Decision Making</b>	<b>10 hours</b>
	<ul style="list-style-type: none"><li>• <b>Operators&amp; Expression</b><ul style="list-style-type: none"><li>o Types of Operators and Expression</li><li>o Precedence &amp; Associativity</li></ul></li></ul>	3 hrs
	<ul style="list-style-type: none"><li>• <b>Console based I/O and related built-in I/O function</b><ul style="list-style-type: none"><li>o printf(), scanf(), getch(), getchar(), putchar()</li><li>o Concept of Header File and #include, #define</li></ul></li></ul>	3 hrs
	<ul style="list-style-type: none"><li>• <b>Decision Making Structure</b><ul style="list-style-type: none"><li>o If</li><li>o If-else</li><li>o Nested If-else</li><li>o Switch</li></ul></li></ul>	4 hrs

3	<b>Control Structure &amp; Array</b>	<b>10 hours</b>
	<ul style="list-style-type: none"> <li>• <b>Loop Control Structure</b> <ul style="list-style-type: none"> <li>o While</li> <li>o Do-While</li> <li>o For</li> <li>o Nested loop</li> </ul> </li> </ul>	5 hrs
	<ul style="list-style-type: none"> <li>• <b>Other Statements</b> <ul style="list-style-type: none"> <li>o break, continue, goto, exit</li> </ul> </li> </ul>	1 hrs
	<ul style="list-style-type: none"> <li>• <b>Array</b> <ul style="list-style-type: none"> <li>o One, Two – Dimensional Arrays</li> <li>o Initialization and working with Array.</li> <li>o Introduction to Multidimensional Arrays.</li> </ul> </li> </ul>	4 hrs
4	<b>String &amp; Functions</b>	<b>10 hours</b>
	<ul style="list-style-type: none"> <li>• <b>Character Arrays and Strings</b> <ul style="list-style-type: none"> <li>o Initialization and working with String.</li> <li>o Comparing and String Handling functions.</li> </ul> </li> </ul>	2 hrs
	<ul style="list-style-type: none"> <li>• <b>User Defined Functions</b> <ul style="list-style-type: none"> <li>o Introduction</li> <li>o Elements of UDF</li> </ul> </li> </ul>	2 hrs
	<ul style="list-style-type: none"> <li>• <b>Categories of UDF</b> <ul style="list-style-type: none"> <li>o No argument no return value</li> <li>o Arguments but no return value</li> <li>o No argument but returns a value</li> <li>o Arguments with return value</li> </ul> </li> </ul>	3 hrs
	<ul style="list-style-type: none"> <li>o Recursion</li> <li>o Nesting Function</li> <li>o Variable Scope</li> <li>o Visibility and lifetime in function</li> <li>o Storage Classes</li> </ul>	3 hrs

#### TEXT BOOK/S:

##### 1. Introduction to C Programming

Publication : Oxford

By Reema Thareja

#### REFERENCE BOOKS:

1. Computer Fundamentals & Programming in C

Publication : Oxford

By Pradip Dey, Manas Ghosh

2. Programming in ANSI C (Fifth Edition 2011)

Publication : McGraw Hill

By Balagurusamy

#### WEB RESOURCES:

1. <https://www.tutorialspoint.com/cprogramming/>
2. <http://www.javatpoint.com/c-programming-language-tutorial>
3. <https://www.programiz.com/c-programming>
4. <http://www.cprogramming.com/tutorial/c-tutorial.html>
5. <http://www.programmingsimplified.com/c-program-examples>

#### REQUIRED SOFTWARE/S

1. Turbo C