Course Number and Name
BCS101 & Fundamentals of Computing and Programming

Credits and Contact Hours
3 & 45

Course Coordinator's Name
Mrs.Keerthika

Text Books and References

Text Books:
1. Ashok, N.Kamthane,"Computer Programming", Pearson Education (2012).
2. Anita Goel and Ajay Mittal, "Computer Fundamentals and Programming in C", Dorling V Kindersley (India Pvt Ltd). Pearson Education in South Asia, (2011).
3. Yashavant P. Kanetkar, "Let us C", 13th Edition, BPB Publications (2013).
4. Yashavant P. Kanetkar, "Let us C++"10th Edition, BPB Publications (2013)**.**

References:
1. Pradeep K.Sinha, Priti Sinha "Foundations of Computing", BPB Publications (2013).
2. Byron Gottfried, "Programming with C", 2nd edition, (Indian Adapted Edition), TMH Publication.
3. Pradip Dey, Manas Ghosh, Fundamentals of Computing and Programming in 'C' First Edition, Oxford University Press (2009).
4. The C++ Programming Language , 4th Edition, Bjarne Stroustrop, Addison-Wesley Publishing Company (2013).

Course Description
Students will understand the basics of computers and solve computer oriented problems using Various computing tools.

Prerequisites	Co-requisites
+2 level Computer science	Nil

required, elective, or selected elective (as per Table 5-1)
Required

Course Outcomes (COs)

CO1: Learn the fundamental principles in computing.
CO2: Learn to write simple programs using computer language
CO3: To enable the student to learn the major components of a computer system.
CO4: Computing problems
CO5: To learn to use office automation tools.
CO6: To interpret and relate programs

Student Outcomes (SOs) from Criterion 3 covered by this Course											
COs/SOs	a	b	c	d	e	f	g	h	i	j	k	l
CO1	H					H						
CO2		L	H		M							
CO3		L		S								
CO4	M		M	W		M						
CO5		L	L									
CO6	H					H						

List of Topics Covered

UNIT I   INTRODUCTION TO COMPUTER   9
Introduction- Characteristics of computer-Evolution of Computers-Computer Generations -
Classification of Computers- Basic Computer Organization-Number system. Computer
Software: Types of Software—System software-Application software-Software Development
Steps

UNIT II   PROBLEM SOLVING AND OFFICE AUTOMATION   9
Planning the Computer Program – Purpose – Algorithm – Flowcharts– Pseudo code Introduction
to Office Packages: MS Word, Spread Sheet, Power Point, MS Access, Outlook.

UNIT III   INTRODUCTION TO C   9
Overview of C-Constants-Variables-Keywords-Data types-Operators and Expressions.
Managing Input and Output statements-Decision making-Branching and Looping statements.

UNIT IV   ARRAYS AND STRUCTURES   9
Overview of C-Constants, Variables and Data types-Operators and Expressions -Managing Input
and Output operators-Decision making-Branching and Looping.

UNIT V   INTRODUCTION TO C++   9
Overview of C++ - Applications of C++-Classes and objects-OOPS concepts -Constructor and
Destructor- A simple C++ program –Friend classes and Friend Function.