Course Number and Name

BCS101 - FUNDAMENTALS OF COMPUTING AND PROGRAMMING

Credits and Contact Hours

3 & 45

Course Coordinator's Name

Ms Fathima

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. PradipDey, ManasGhosh, Fundamentals of Computing and Programming in 'C' First Edition, Oxford University Press(2009).
4. The C++ Programming Language , 4thEdition, Bjarne Stroustrop, Addison-Wesley Publishing Company (2013).

Course Description

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

Prerequisites	Co-requisites
Nil	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
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.