

Course Number and Name												
<b>BCS101 - FUNDAMENTALS OF COMPUTING AND PROGRAMMING</b>												
Credits and Contact Hours												
<b>3 &amp; 45</b>												
Course Coordinator's Name												
Ms.Madhubala												
Text Books and References												
<b>TEXT BOOKS:</b>												
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).												
<b>REFERENCES:</b>												
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 , 4 <sup>th</sup> Edition, Bjarne Stroustrup, 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 Physics						NIL						
required, elective, or selected elective (as per Table 5-1)												
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						
<b>List of Topics Covered</b>													
<b>UNIT I INTRODUCTION TO COMPUTER</b>												<b>9</b>	
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													
<b>UNIT II PROBLEM SOLVING AND OFFICE AUTOMATION</b>												<b>9</b>	
Planning the Computer Program – Purpose – Algorithm – Flowcharts– Pseudo code Introduction to Office Packages: MS Word, Spread Sheet, Power Point, MS Access, Outlook.													
<b>UNIT III INTRODUCTION TO C</b>												<b>9</b>	
Overview of C-Constants-Variables-Keywods-Data types-Operators and Expressions. Managing Input and Output statements-Decision making-Branching and Looping statements.													
<b>UNIT IV ARRAYS AND STRUCTURES</b>												<b>9</b>	
Overview of C-Constants, Variables and Data types-Operators and Expressions -Managing Input and Output operators-Decision making-Branching and Looping.													
<b>UNIT V INTRODUCTION TO C++</b>												<b>9</b>	
Overview of C++ - Applications of C++-Classes and objects-OOPS concepts -Constructor and Destructor- A simple C++ program –Friend classes and Friend Function.													