Name of the programme			Bachelor of Science in Computer science	
Short Name of the programme			B.Sc. Computer science	
Code	of the pro	gramme	BCS	
		PROGRAMME	OUTCOMES - POs	
SI. NO	CO No:		Programme Outcomes	
1	PO 1	Fundamental understanding of the pri disciplines	nciples of Computer Science and its connections with other	
2	PO 2	Procedural knowledge that creates different types of professionals related to Computer Science, including research and development, teaching and industry, government and public service		
3	PO 3	Skills and tools in areas related to com of study	puter science and current developments in the academic fields	
4	PO 4	Use knowledge, understanding and skills required for identifying problems and issues, collection of relevant quantitative and/or qualitative data drawing on a wide range of sources, and their application, analysis and evaluation using methodologies as appropriate to Computer Science for formulating solutions		
5	PO 5	Communicate the results of studies undertaken in Computer Science accurately in a range of different contexts using the main concepts, constructs and techniques		
6	PO 6	Meet one's own learning needs, drawing on a range of current research and development work and professional materials		
7	PO 7	Apply Computer Science knowledge and transferable skills to new/unfamiliar contexts,		
8	PO 8	Demonstrate subject-related and transferable skills that are relevant to industry and employment opportunities.		
	PROGRAMME SPECIFIC OUTCOMES - PSOs			
SI. NO	CO No:	Programme Specific Outcomes		
1	PSO 1	Demonstrate the aptitude of Computer Programming and Computer based problem solving skills.		
2	PSO 2	Display the knowledge of appropriate theory, practices and tools for the specification, design, implementation		
3	PSO 3	Ability to learn and acquire knowledge through online courses available at different massive open online course providers.		
4	PSO 4	Ability to link knowledge of Computer Science with other two chosen Complementary disciplines of study.		
5	PSO 5	Display ethical code of conduct in usage of Internet and Cyber systems.		
6	PSO 6	Ability to pursue higher studies of specialization and to take up technical employment.		
7	PSO 7	Ability to formulate, to model, to design solutions, procedure and to use software tools to solve real world problems and evaluate .		
8	PSO 8	Ability to operate, manage, deploy, configure computer network, hardware, software operation of an organization.		
9	PSO 9	Ability to present result using different presentation tools.PSO10. Ability to appreciate emerging technologies and tools.		

COURSE OUTCOMES - COs					
	Core Course				
Sem ester	Course code	Course Title	CO No:	Course Outcomes	
			CO1	Familiar with fundamental concepts of Computer hardware and software	
		COMPUTER	CO2	Have a knowledge of different Number system, Digital codes and Boolean Algebra	
1	BCS1B01	FUNDAMENIALS	CO3	Understand the problem-solving aspect	
			CO4	Demonstrate the algorithm and flow chart for the given problem	
			CO5	Design a Webpage with CSS	
			CO1	Interpret the basic principles of C Programming.	
			CO2	Acquire decision making and looping concepts	
		PROBLEM SOLVING	CO3	Design and develop modular programming.	
	BCS2B02	USING C	CO4	Explore usage of Arrays, strings, structures, union and files.	
			CO5	Effective utilization of pointers and dynamic memory allocation	
2		PROGRAMMING LABORATORY I: LAB EXAM OF 1 ST & 2 ND SEMESTER -HTML AND PROGRAMMING IN C	CO1	•Analyze a web page and identify its elements and attributes.	
			CO2	Create web pages using HTML5 and Cascading Style Sheets	
	BCS2B03		CO3	Design and develop a webpage with Hyperlinks	
			CO4	Enhance their analyzing and problem solving skills and use the same for writing programs in C.	
			CO5	To write diversified programs using C language	
			CO1	Explain basic principles of Python programming language	
3	XXXXA11	PYTHON PROGRAMMING	CO2	Implement decision making and loop statements in Python,.	
			CO3	Implement GUI applications using Python	
			CO4	Explain modular programming concepts using Python	
			CO5	Familiarize with List, Tuple, Dictionary concepts in Python	
	XXXXA12	SENSORS AND TRANSDUCERS	CO1	Explain resistance, inductance and capacitance transducers	
			CO2	Perceive the concepts of temperature transducers	
			CO3	Perceive the concepts level transducers and pressure	
			CO4	Explain flow transducers, electromagnetic transducers, radiation sensors and sound transducers	
			CO1	To be familiar with fundamental data structures and with the manner in which these data structures can best be implemented; become accustomed to the description of algorithms in both functional and procedural styles	

	BCS3B04	DATA STRUCTURES USING C	CO2	To have knowledge of complexity of basic operations like insert, delete, search on these data structures.
			CO3	Ability to choose a data structure to suitably model any data used in computer applications.
			CO4	Design programs using various data structures including hash tables, Binary and general search trees, graphs etc.
			CO5	Implement and know the applications of algorithms for sorting, pattern matching
		DATA COMMUNICATION AND OPTICAL FIBERS	CO1	To Acquaint with the structure of Data Communications System and its components
			CO2	To Familiarize with different network terminologies and transmission media
	XXXXA13		CO3	To gain knowledge of the different multiplexing techniques ,Telephone system,Mobile System-GSM
			C04	To become familiar with the functions of a Datalink layer and Switching
			CO5	To acquire the knowledge of Optical Fibre Cable and its working
		MCDODDOCESSODS	CO1	To study general architecture of microprocessor
	XXXXA14	ARCHITECTURE AND PROGRAMMING	CO2	To write assembly language programs, both simple programs and interfacing programs
			CO3	To know how to interface peripheral devices with 8085
			CO4	To study the architecture of 8086 microprocessor
4	BCS4B05	DATABASE MANAGEMENT SYSTEM AND RDBMS	CO1	Gain knowledge of database systems and database management system software
			CO2	Ability to model data in applications using conceptual modelling tools such as ER Diagrams and design data base schemas based on the model.
			CO3	Formulate, using SQL, solutions to a broad range of query and data update problems
			CO4	Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database.
			CO5	Be acquainted with the basics of transaction processing and concurrency control.
	BCS4B06	PROGRAMMING LABORATORY II: LAB EXAM OF 3 RD AND 4 TH SEMESTER -DATA STRUCTURES AND RDBMS	CO1	Make use of typical data definitions and manipulation commands
			CO2	Test the implementation of nested and join queries
			CO3	Develop simple application using views, sequences and synonyms.
			CO4	Inspect and implement applications that require front-end tools
			CO5	Familiarizing with different datastructures tools like searching ,sorting,Linked List etc

5 COMPUTER COI To make students understand the basic structure, and characteristics of a digital computer Instruction and In Design   BCS5B07 ORGANIZATION AND ARCHITECTURE CO3 To familiarize with Computer Instruction and In Design   BCS5B08 ORGANIZATION AND ARCHITECTURE CO3 To familiarize with the Memory organization inc cache memories and virtual memory   BCS5B08 JAVA CO3 To familiarize with the Memory organization inc cache memories and virtual memory   BCS5B08 JAVA CO1 To familiarize with the Memory organization inc cache memories and virtual memory   BCS5B08 JAVA CO1 To understand the I/O devices and standard I/O   BCS5B08 JAVA CO1 Knowledge of the structure and model of the Java programming language.   CO2 Use the Java programming language. CO2 Use the Java programming technologies   PROGRAMMING CO1 Founderstand basics of the Internet and World V CO2   CO2 To learn basic skill to develop responsive web at CO3 To acquire the knowledge of HTML   CO4 CO4 To understand basic concept of client side scripti language -javascript   CO5 Fo understand the server side scripting language CO6   BCS5B10 PRINCIPLE	
5   COMPUTER ORGANIZATION AND ARCHITECTURE   CO2 CO3   To familiarize with Computer Instruction and In Design     BCS5B07   ORGANIZATION AND ARCHITECTURE   CO3   To make students know the different types of co and Addressing Modes     BCS5B08   JAVA PROGRAMMING   CO4   To familiarize with the Memory organization inc cache memories and virtual memory     CO3   To understand the I/O devices and standard I/O wrogramming language.   CO1   Knowledge of the structure and model of the Jav programming language.     CO4   PROGRAMMING   CO3   Develop software in the Java programming language fo programming technologies     CO4   Evaluate uscr requirements for software fu required to decide whether the Java programming language can meet uscr requirements     CO4   To learn basic skill to develop responsive web at CO3   To acquire the knowledge of HTML     CO4   To learn basic softe Internet and World V CO2   To learn basic concept of client side scripti language-javascript     CO5   FO inderstand basic concept of client side scripti language -javascript   Ability to apply software engineering print techniques.     PRINCIPLES OF SOFTWARE   CO3   Familirize with Unified Modeling Language     CO4   PROGRAMMING   CO3   Familirize with unified Modeling Language	cture, operation
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5   BCS5B08   JAVA PROGRAMMING   CO4 CO2   To familiarize with the Memory organization inc cache memories and virtual memory     5   JAVA PROGRAMMING   CO1   Knowledge of the structure and model of the Java programming language,     CO2   Develop software in the Java programming language,   Use the Java programming language fo programming technologies     CO3   Develop software in the Java programming language, and the intervents for software fur required to decide whether the Java programming language can meet user requirements     S   WEB   CO1   To learn basics of the Intervent and World V CO2   To learn basic skill to develop responsive web at CO3   CO4     CO4   To understand basic concept of client side script language -javascript   CO5   To understand basic concept of client side script language -javascript     CO3   For understand the server side scripting language CO6   To produce efficient, reliable, robust and cos software solutions     BCS5B10   SOFTWARE ENGINEERING   CO3   Familirize with Unified Modeling Language     CO4   Require the basics of software testing and m phase   CO1   Understand different types of computers     CO4   OPEN COURSE: INTRODUCTION TO COMPUTERS AND OFFICE   CO1   Understand different types of computers     CO3<	of control unit
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AUTOMATION CO4 Learn presentations using Open Office Im	Excel and Open
	e Impress/MS-
CO1 To gain knowledge of developing end user a using Android SDK	ser application
ANDROID CO2 To familiarize with Android Resources	
DC30B11   PROGRAMMING   CO3   To acquaint with user interfaces development in	nt in Android
CO4 To acquire knowledge about creating menus and files in Android	s and operating

			CO1	To Familiarize with the Objectives, functions and types of Operating System
	BCS6B12	OPERATING SYSTEMS	CO2	To have a basic knowledge about process, Threads, Deadlock
			CO3	To understand the knowledge of Linux shell programming
			CO4	To learn about CPU scheduling and memory management
			CO1	To understand about different network terminologies
			CO2	To familiarize with different layers of network
	BCS6B13	COMPUTER	CO3	To understand the functions of datalink layer and network layer
			CO4	To familiarize with the functions of Transport layer
			CO5	To understand the concept of network security and Cryptography
6		PROGRAMMING LABORATORY III:	CO1	To learn about the Object Oriented Concepts in Java Programming
	BCS6B14	LAB EXAM OF V TH SEMESTER JAVA AND PHP PROGRAMMING	CO2	To understand the practical knowledge of Web programming using PHP
		PROGRAMMING	CO1	To learn the practical knowledge of Android Programming
	BCS6B15	LABORATORY IV: LAB EXAM OF ANDROID AND LINUX SHELL PROGRAMMING	CO2	To familiarize with the practical knowledge of shell programming
	BCS6B17	(PROJECT WORK OR RESEARCH METHODOLOGY PAPER) AND INDUSTRIAL VISIT	CO1	To acquire the implementation level knowledge and interaction with industry
			CO1	To understand the basics of technical communication
	BCS6B16e	TECHNICAL WRITING	CO2	To learn Constituents of Technical Written Communication
			CO3	To learn Forms of Technical Communication
			Ope	n Course
			C01	Understand different types of computers
5	BCS5D01	OPEN COURSE: INTRODUCTION TO COMPUTERS AND OFFICE AUTOMATION	CO2	Learn documentation using Word processing software such as MS word and Open Office Writer
			CO3	Learn calculations using spreadsheet MS Excel and Open Office Writer
			CO4	Learn presentations using Open Office Impress/MS- Power Point):
		Co	omplem	entary Course

1	CSC1C01	COMPLEMENTARY-1 -COMPUTER FUNDAMENTALS	CO1	To understand the basic number system, Conversion and Computer Codes
			CO2	To learn Boolean Algebra and different axioms and theorems in it
			CO3	To understand the basic Computer Organisation
			CO4	To Familiarize with algorithms and flowcharts
		COMPLEMENTARY-1 -FUNDAMENTALS OF SYSTEM	CO1	To understand the Concept of System Software
2	CSC2C02		CO2	To learn the Computer Network
			CO3	To familiarize the database management System
3	CSC3C03	PROBLEM SOLVING USING C	CO1	To learn the basic syntax of C language
			CO2	To understand the Control , conditional, loop statements in C
			CO3	To familiarize with the user defined functions, pointers, and datafiles in C
	CSC4C04	DATA STRUCTURES USING C	CO1	To learn the Concepts of datastuctures using C
4			CO2	To understand the concepts of Linked Lists,
			CO3	To learn the different searching and sorting techniques
	CSC4C05	PROGRAMMING LAB: C AND DATA STRUCTURE	CO1	To Acquire the practical knowledge of C language and data structures
			CO2	To obtain knowledge of the implementation of searching, sorting, Linked list