Course Outcomes

BCA

Course Outcomes
BCA 1 to 6 Sem.
2016 Scheme Onwards

SEMESTER-I		
BCAP1-101	Problem Solving using C	1. Students will learn to write algorithm for solutions to various real life problems and converting the algorithms into computer programs using C language. 2. To gain experience about structured programming. 3. To help Students to understand implementation of C language 4. To understand various features in C
BCAP1-102	Information Technology and Office Automation	1. To gain and understanding of the core concepts and technologies which constitute information 2. The student should be able to demonstrate competency in a core set of applications, including Microsoft Word, Excel and PowerPoint. 3. The student should be able to demonstrate competency in using PC operating systems and using the Internet as a search tool. 4. The intention is for the student to be able to articulate and demonstrate a basic understanding of the fundamental concepts of Information Technology.
BCAP1-103	DIGITAL ELECTRONICS	1. To introduce basic postulates of Boolean algebra and shows the correlation between Boolean expressions 2. To introduce the methods for simplifying Boolean expressions 3. To outline the formal procedures for the analysis and design of combinational circuits and sequential circuits 4. To introduce the concept of memories, programmable logic devices and digital ICs.
BHUM0-101	COMMUNICATIVE ENGLISH	1. Understand and appreciate the need of communication training. 2. Use different strategies of effective communication and select the most appropriate mode of communication for a given situation. 3. Speak effectively and assertively and Correspond effectively through different modes of written communication.

		4. Present himself/herself professionally through effective resumes and interviews.
BHUM0-103	HUMAN VALUES & PROFESSIONAL ETHICS	1. Understanding the value education. 2. Understanding harmony in the human being, family and society. 3. Understanding harmony in the society, nature and existence. 4. Understanding of harmony on professional ethics.
BCAP1-104	Software Lab-I (PROBLEM SOLVING USING C BASED ON BCAP1-101)	1. Be able to implement, test, debug, and document programs in C. 2. Understand low-level input and output routines 3. Program with pointers and arrays, perform pointer arithmetic, and use the pre-processor 4. Be able to write programs that perform explicit memory management 5. Understand and use the common data structures typically found in C programs — namely arrays, strings
BCAP1-105	Software Lab-II (INFORMATION TECHNOLOGY AND OFFICE AUTOMATION)	1. Familiarize with PC and WINDOWS commands, File creation, Editing, Directory creation. 2. Become proficient in using the features of word processing in Microsoft Word. 3. Become proficient in using spreadsheet software and be able to create technical and complex spreadsheets for data analyses using Microsoft Excel. 4. Use a database such as Microsoft Access. & Implementation of MS DOS. 5. Develop effective and professional business presentations using Microsoft Power Point.
SEMESTER-II		
BCAP1-206	OBJECT ORIENTED PROGRAMMING USING C++	1. Creating class and objects in C++ 2. Implementing inheritance, polymorphism and object relationship in C++. 3. Designing methods and procedures. 4. Constructor and destructor programs.
BCAP1-207	COMPUTER ORGANIZATION AND ARCHITECTURE	1. Introduction to Registers, Micro operations, Common Bus System. 2. Introduction to Instruction, Instruction Cycle, Interrupt and Interrupt Cycle.

		3. Addressing Modes, Concept of I/O bus, DMA Controller. 4. Memory Hierarchy, Cache Memory, Replacement Algorithms, Mobile Devices Architecture & Synchronous and Asynchronous Data Transfer.
BCAP1-208	INTERNET AND ITS APPLICATIONS	1. Protocols and standards supporting Internet Applications design and security issues 2. Build tools that assist in automating data transfer over the Internet. 3. Knows basic Internet technologies, specification and tools for internet services implementation. 4. Knows how to design and implement Internet systems for enhancing education and engineering design, by means of efficient Internet technologies and services.
BCAP1-209	MULTIMEDIA AND APPLICATIONS	1. To understand multimedia systems and their applications. 2. This course covers the different compression standards used in multimedia, some current technology and related issues 3. Identify and use hardware components (input and output devices) used in desktop publishing, graphics/animation and multimedia. 4. Model respect for intellectual property when manipulating, morphing, and editing video, graphics, sound, and text.
BCAP1-211	Software Lab-IV (INTERNET AND ITS APPLICATIONS BASED)	1. Understand, analyze and apply the role of languages like HTML, DHTML, CSS, Java Script 2. Analyze a web page and identify its elements and attributes in comparison to traditional projects. 3. Create dynamic web pages using Javascript. 4. Create web pages using HTML,DHTML,CSS.
BCAP1-210	Software Lab-III (OOPS Using C++)	1. To be able to apply an object oriented approach to programming and identify potential benefits of object-oriented programming over other Approaches. 2. To be able to reuse the code and write the classes which work like built-in types. 3. To be able to design applications which are easier to debug, maintain and extend. 4. To be able to apply object-oriented concepts in real

		world applications.
BMAT0-204	FUNDAMENTALS OF MATHEMATICS	1. Learn fundamental mathematical concepts of matrix and determinant and how to apply them for finding the solution of equations 2. Understand the concepts of differential calculus and how to apply them for finding the maxima and minima. 3. Learn the concepts of integral calculus in which they find integration by parts, By partial fraction, by substitution and learn about definite, indefinite integrals. 4. Understand the Trapezoidal method, Simpson's1/3 rule and Simpson's 3/8 rule using integration. Problems related to compound interest, depreciation and Annuities.
SEMESTER III		
BCAP1-312	Data Structures	1. Understanding of data structure. its objectives , times and space complexity 2. Understanding of various linear data structure , like linked list, stack ,queue and their implementation 3. Understanding of non-linear data structure , tree and its implementation 4. Implementation of various searching and sorting algorithm.
BCAP1-313	PROGRAMMING IN JAVA	1. Understand the concept of OOPs as well as the purpose and usage principles of Inheritance, polymorphism, encapsulation etc. 2. Understand JVM Concept , Data types and Operators, Strings 3. Understand Internet Programming Using Java Applets. 4. Make use of array , constructors ,Inheritance, Packages and Interfaces.
BCAP1-314	DISCRETE STRUCTURES	1. It is to learn that how to remember some fundamental mathematical concepts and terminology; how to apply and analyze recursive definitions; Permutations; Connectives, well-formed formulas, Truth Tables, tautology, equivalence implication, Normal forms, predicates, Free & Bound variables, Rules of

		inference, Consistency, proof of contradiction, Automatic Theory Proving; how to count some different types of discrete structures; how to create techniques for constructing mathematical proofs, illustrated by discrete mathematics examples. 2. It is to model ,evaluate and analyze computational processes using analytic and combinatorial methods, Properties of binary Relations, equivalence, compatibility and partial ordering relations, Hasse diagram, Functions, Inverse functions, Composition of functions, Recursive functions, Lattice and its properties and to apply principles of discrete probability to calculate probabilities and expectations of simple random processes 3. It is to understand the necessary back ground of discrete structures with particular reference to the relationships between discrete structures and their data structure counterparts including algorithm development and to create a complete knowledge on various discrete structures available in literature. 4. It is to learn that how to apply sub graphs, connected components, cyclic graph, Bipartite graph, Planar graph, Euler's formula, Euler circuit, Hamiltonian Graph, Chromatic number, Trees, Spanning tree of a Graph, Breadth First & Depth First Spanning trees, Binary Tree, Conversion of a tree to binary tree. Tree traversals, Representation of Expressions by Binary tree, Forest, Binary search treesand to gain knowledge on discrete structures in literature.
BCAP1-315	Software Lab-V (Data Structures)	1. Implementation of linked list using C/C++ 2. Implementation of stack queue using linked list and its operation like searching, inserting, deleting. 3. Implementation of binary tree and its operations. 4. Implementation of different sorting and searching techniques using C/C++.
BCAP1-316	Software Lab-VI(Programming in	1. Internet Programming using Applets. 2. Apply basics of event programming.

	Java)	3. Apply String Handling Functions. Install JDK and Its Editor 4. Method to write, saves, compiles and executes Java Programs. 5. Implement the concepts of classes, loops, conditions & constructors, Inheritance, concepts of Packages and Interfaces.
BHUMO-106	Technical English	1. Understand the importance of communication in business. 2. Produce effectively different forms of business writing such as letters, email and phone conversation. 3. Practice a prescribed set of grammar items in suitable context. 4. Improve the interview skills/ presentation skills with the help of speaking Skills.
BCAP1-356	INTRODUCTION TO MICROPROCESSORS	1. Describe the basic architecture of Microprocessor and Microcontroller system. 2. Discuss 8085 Assembly Language Programming, Programming model of 8085. 3. To describe a typical I/O interface& to discuss timing diagrams. 4. To describe different types of memory used in Microcontroller system.
BCAP1-357	EMBEDDED SYSTEM	1. Describe he differences between the general computing systems and the embedded system, also recognize the classification of embedded systems. 2. Become aware of the recent trends in embedded systems design and embedded software design issues. 3. Design real time embedded system using the PIC microcontroller 16F877A. 4. Analyze various examples of embedded systems based on PIC Microcontroller 16F877A. 5. Understand the different applications of embedded systems
SEMESTER IV		
BCAP1-417	Operating Systems	1. Understand functions, Role, different structures and views of Operating system 2. Understand Process management in operating

		system. 3. Understand Memory Management in operating system. 4. Understand Device Management in operating system
BCAP1-418	ANDROID APPLICATION DEVELOPMENT	1. Describe the basic components of an Android application. 2. Build user interfaces with fragments, views, form widgets, text input, lists, tables, and more. 3. Support user-specific preferences using the Android Preferences API, JSON & Use AsyncTaskLoader. 4. Store application data on the mobile device, in internal or external storage locations
BCAP1-419	Database Management Systems	1. Describe fundamental elements of RDBMS. 2. Explain the basic concepts of data models and database language SQL. 3. Design E-R diagram to represent simple database applications scenarios. 4. Criticize a database and improve the design by normalization.
BCAP1-421	Software Lab-VIII (Database Management Systems)	1. Understand, appreciate and effectively explain the underlying concepts of database technologies. 2. Design& implement a database schema for given problem domain. 3. Populate & query a database using SQL DML/DDL commands. 4. Normalize a database. 5. Programming PL/SQL including stored procedures, stored functions, cursors, packages.
BCAP1-458	Software Engineering	1. Understand the process to be followed in SDLC. 1. Apply design and testing principles to software project development & Design Methodologies. 2. Apply the testing principles to software project development. 3. Apply the maintenance process to software project development.
BCAP1-459	SOFT COMPUTING	1. To know about the basics of soft computing techniques and also their use in some real life situations. 2. To learn the key aspects of computing

		3. To understand the features of neural network and its applications
SEMESTER V		
BCAP1-522	Linux Administration	
BCAP1-523	Programming in ASP.Net	1. Set up a programming environment for ASP.net programs. 2. Configure an asp.net application. 3. Creating ASP.Net applications using standard .net control 4. Develop a data driven web application.
BCAP1-524	COMPUTER NETWORKS	1. Understanding network models 2. Understand different network technologies 3. Understand the effects of using different networking topologies 4. Be updated with different advanced network technologies that can be used to connect different networks.
BCAP1-560	NETWORK SECURITY	1. Understand Security Concepts, Ethics in Network Security. 2. Understand Security Threats, and the Security Services and Mechanisms to counter them. 3. Comprehend and apply Authentication Services and Mechanisms. 4. To make students aware of Cryptography.
BCAP1-561	ARTIFICIAL INTELLIGENCE	1. Understand different types of AI Agents. 2. Know various AI search algorithms (uninformed, informed, heuristic, constraint satisfaction, genetic algorithms. 3. Understand the fundamentals of knowledge representation (logic-based, frame-based, semantic nets), inference and theorem proving 4. To provide basics of Expert Systems
SEMESTER VI		
BCAP1-627	Computer Graphics	1. Understand the foundations of Computer graphics. 2. Understand the concept of Geometric mathematical and algorithmic concepts necessary for programming computer graphics. 3. Understand the comprehension of window clipping and view port object representation in relation to

		images displayed on screen. 4. Understand the concepts of geometric and composite transformations on objects.
BCAP1-628	EMERGING TRENDS IN INFORMATION TECHNOLOGY	1. Recognize the concepts of emerging technologies. 2. Analyze the components of cloud computing. 3. Critically analyze case studies to derive the best practice model to apply when developing and deploying parallel, distributed, cloud and IoT based applications 4. To understand the basics of soft computing
BCAP1-630	Software Lab-XI (Computer Graphics)	1. Implement simple graphics programs using C/C++ 2. Write a program like draw a line, circle, and ellipse. 3. Implement the programs with flood fill functions. 4. Image Editing using Clipping techniques & 2D, 3D techniques.
BESE0-101	ENVIRONMENTAL STUDIES	1. To identify global environmental problems arising due to various engineering/industrial/ and technological activities and the science behind these problems 2. To realize the importance of ecosystem and biodiversity for maintaining ecological balance. 3. To identify the major pollutants and abatement devices for environmental management and sustainable development. 4. To estimate the current world population scenario and thus calculating the economic growth, energy requirement and demand. 5. To understand the conceptual process related with the various climatologically associated problems and their plausible solutions
BCAP1-663	CLOUD COMPUTING	1. To understand the basic concepts cloud computing 2. To understand the taxonomy and types of Cloud Computing. 3. To understand different hypervisors of clouds for the virtualization 4. To understand the basics of advancement in cloud computing