

DEPARTMENT OF BCA (Science)

Programme Name - BCA (Science)

Programme Outcomes

1. Ability to adapt analytical and logical thinking in order to solve real world problems and deploy reliable software programs.
2. Ability to investigate complex problems and provide computer based solutions.
3. Ability to adapt new technologies for upgrading their skills and contributing to a lifelong learning.
4. Ability to demonstrate knowledge of Computers and its applications in order to enhance basic understanding of various software technologies.
5. Ability to become employable in a variety of IT companies and government sectors and also seek entrepreneurship opportunities for the betterment of an individual and the society at large.
6. Ability to create and manage multidisciplinary projects and successfully apply software and project management principles.
- 7.

Course outcomes

First Year 2019 (CBCS) PATTERN

Semester I

Course: Fundamentals of Computer

Code: BCA111

Course Credits: 4

Course Outcomes (CO):

After completion of the course, a student will be able to

Course Outcome(CO)	Description
CO1	Define working of computers and peripherals, types of software and languages
CO2	Troubleshoot the computer systems and use utility software
CO3	Choose commands and features of operating systems and application software
CO4	Use open source software C

Course: Problem solving and C programming

Code: BCA 112

Course Credits: 4

Course Outcomes (CO):

After completion of the course, a student will be able to

Course Outcome(CO)	Description
CO1	Identify and understand the working of key components of a computer system (hardware, software, firmware etc.). Understand the computing environment, how computers work and the strengths and limitations of

	computers.
CO2	Identify and understand and choose the right data representation format based on the requirements of the problems.
CO3	Identify and understand the representation of numbers, alphabets and other characters in computer systems.
CO4	Understand, analyze and implement software development tools like algorithms, pseudo codes and programming structure.
CO5	Approach the programming task using techniques learned and write pseudo code.
CO6	Write the program on a computer, edit, compile, debug, correct, recompile and run it.
CO7	Study, analyze and understand the logical structure of a computer program, and different constructs to develop a program in 'C' language & Write small programs related to simple/ moderate mathematical, and logical problems.

Course: Business Communication

Code: BCA118

Course Credits: 4

Course Outcomes (CO):

After completion of the course, a student will be able to

Course Outcome(CO)	Description
CO1	Guide to communicate effectively
CO2	Help to meet domestic and international business requirements.
CO3	Communicate via electronic mail, internet and other technologies
CO4	Make an effective business presentation.
CO5	Able to listen to lectures, public announcements and news on TV and radio.

Course: Applied Mathematics

Code: BCA118

Course Credits: 4

Course Outcomes (CO):

After completion of the course, a student will be able to

Course Outcome(CO)	Description
CO1	Relate and apply techniques for constructing mathematical proofs and make use of appropriate set operations, propositional logic to solve problems
CO2	Use function or relation models to interpret associated relationships
CO3	Apply basic counting techniques and use principles of probability
CO4	Given a data, compute various statistical measures of central tendency
CO5	Use appropriate Sampling techniques

Second Year (2019 pattern)**Course: Data Structure****Code: BCA 231****Course Credits: 4****Course Outcomes (CO):****After completion of the course, a student will be able to**

Course Outcome(CO)	Description
CO1	Understand and restates the fundamentals of basic data structure
CO2	Develop skills in implementations and applications of data structure
CO3	Apply appropriate algorithm
CO4	Design an efficient algorithm for the given algorithm.
CO5	Determine time and space complexity.

Course: Database Management Systems –II**Code: BCA 232****Course Credits: 4****Course Outcomes (CO):****After completion of the course, a student will be able to**

Course Outcome(CO)	Description
CO1	Formulate SQL queries with the help of advanced SQL features
CO2	Perform various Database operations like functions, cursors, triggers and exception handling using PL/PostgreSQL
CO3	Compare and contrast different concurrency control and recovery techniques.
CO4	Apply mechanisms for database security
CO5	Analyze various database system architectures.

Course: Computer Networks**Code: BCA 233****Course Credits: 4****Course Outcomes (CO):****After completion of the course, a student will be able to**

Course Outcome(CO)	Description
CO1	Describe how computer networks are organized with the concept of layered approach.
CO2	Familiarize the student with the basic taxonomy and terminology of the computer networking area.
CO3	Identify the different types of network topologies and protocols.
CO4	Enumerate the layers of the OSI model and TCP/IP. Explain the function(s) of each layer
CO5	Illustrate applications of Computer Network, Compare and contrast different routing and switching algorithms

Third Year (2019 pattern)**BCA351****Course Credits: 4****Course: Programming in Java****Code:**

Course Outcomes (CO):**After completion of the course, a student will be able to**

Course Outcome(CO)	Description
CO1	Identify classes, objects, class members and relationships for a given problem.
CO2	Design end to end applications using object oriented constructs.
CO3	Apply collection classes for storing java objects.
CO4	Use Java APIs for program development.
CO5	Handle abnormal termination of a program using exception handling.

Course: Data Mining and Data Science**Code: BCA352****Course Credits: 4****Course Outcomes (CO):****After completion of the course, a student will be able to**

Course Outcome(CO)	Description
CO1	Identify the key processes of data mining, data warehousing and knowledge discovery.
CO2	Design data warehouse with dimensional modeling and apply OLAP operations
CO3	Identify appropriate data mining algorithms to solve real world problems.
CO4	Compare and evaluate different data mining techniques like classification, prediction, clustering and association rule mining.
CO5	Choose an appropriate method to perform exploratory analysis
CO6	Interpret results by carrying out data visualization and formal inference procedures

Course: Principles of Operating Systems**Code: BCA353****Course Credits: 4****Course Outcomes (CO):****After completion of the course, a student will be able to**

Course Outcome(CO)	Description
CO1	Describe, contrast and compare differing structures for operating systems.
CO2	Explain how processes and threads are managed, and evaluate the performance of various scheduling algorithms.
CO3	Understand and explain process synchronization process and deadlock handling techniques.
CO4	Analyze the relationship between the operating system and the hardware environment in which it runs.
CO5	Explain how memory is managed, and evaluate the performance of various page replacement algorithms.

CO6	Defining I/O systems, Device Management Policies and Secondary Storage Structure and Evaluation of various Disk Scheduling Algorithms
CO7	Use system calls for managing processes, memory and the file system.

Course: Artificial Intelligence

Code: BCA354

Course Credits: 4

Course Outcomes (CO):

After completion of the course, a student will be able to

Course Outcome(CO)	Description
CO1	Apply the suitable algorithms to solve AI Problems.
CO2	Identify and apply suitable Intelligent agents for various AI applications.
CO3	Build a smart system using different informed search / uninformed search or heuristic approaches.
CO4	Represent complex problems with expressive language of representation.

Course: Cloud Computing

Code: BCA355

Course Credits: 4

Course Outcomes (CO):

After completion of the course, a student will be able to

Course Outcome(CO)	Description
CO1	Explain the core issues in cloud computing such as security, privacy, and interoperability.
CO2	Choose the appropriate technologies, algorithms, and approaches for the given application.
CO3	Compare and contrast various cloud services.
