Pravara Medical Trust's

Arts, Commerce &Science College, Shevgaon

POs, PSOs and COs

2023-24 (CBCS-2019 Pattern)

Department of B.C.A. (Science)

PROGRAMME: B.C.A. (Science)	
Programme Outcomes	PO-1. Ability to adapt analytical and logical thinking in order to solve real world problems and deploy reliable software programs.
	PO-2. Ability to investigate complex problems and provide computer based solutions.
	PO-3. Ability to adapt new technologies for upgrading their skills and contributing to a lifelong learning.
	PO-4. Ability to demonstrate knowledge of Computers and its applications in order to enhance basic understanding of various software technologies.
	PO-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.
	PO-6. Ability to create and manage multidisciplinary projects and successfully apply software and project management principles.

Course Outcomes
F.Y.B.C.A. (Science) (CBCS-2019)

BCA-111 **Fundamentals of Computer**	CO-1. Define working of computers and peripherals, types of software and languages
	CO-2. Troubleshoot the computer systems and use utility software
	CO-3. Choose commands and features of operating systems and application software
	CO-4. Use open source software C
BCA-112 **Problem solving and C programming**	CO-1. 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.
	CO-2. Identify and understand and choose the right data representation format based on the requirements of the problems.
	CO-3. Identify and understand the representation of numbers, alphabets and other characters in computer systems.
	CO-4. Understand, analyze and implement software development tools like algorithms, pseudo codes and programming structure.
	CO-5. Approach the programming task using techniques learned and write pseudo code.
	CO-6. Write the program on a computer, edit,

	compile, debug, correct, recompile and run it.
	CO-7. 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.
BCA-118 **Business Communication**	CO-1. Guide to communicate effectively
	CO-2. Help to meet domestic and international business requirements.
	CO-3. Communicate via electronic mail, internet and other technologies
	CO-4. Make an effective business presentation.
	CO-5. Able to listen to lectures, public announcements and news on TV and radio.
BCA-118 **Applied Mathematics**	CO-1. Relate and apply techniques for constructing mathematical proofs and make use of appropriate set operations, propositional logic to solve problems
	CO-2. Use function or relation models to interpret associated relationships
	CO-3. Apply basic counting techniques and use principles of probability
	CO-4. Given a data, compute various statistical measures of central tendency
	CO-5. Use appropriate Sampling techniques

S.Y.B.C.A. (Science) (CBCS-2019)

BCA-231 **Data Structure**	CO-1. Understand and restates the fundamentals of basic data structure
	CO-2. Develop skills in implementations and applications of data structure
	CO-3. Apply appropriate algorithm
	CO-4. Design an efficient algorithm for the given algorithm.
	CO-5. Determine time and space complexity.
BCA-232 **Database Management Systems –II**	CO-1. Formulate SQL queries with the help of advanced SQL features
	CO-2. Perform various Database operations like functions, cursors, triggers and exception handling using PL/PostgreSQL
	CO-3. Compare and contrast different concurrency control and recovery techniques.
	CO-4. Apply mechanisms for database security
	CO-5. Analyze various database system architectures.
BCA-233 **Computer Networks**	CO-1. Describe how computer networks are organized with the concept of layered approach.
	CO-2. Familiarize the student with the basic taxonomy and terminology of the computer networking area.
	CO-3. Identify the different types of network topologies and protocols.
	CO-4. Enumerate the layers of the OSI model and TCP/IP. Explain the function(s) of each layer
	CO-5. Illustrate applications of Computer Network, Compare and contrast different routing and switching algorithms

BCA-351 **Programming in Java**	CO-1. Identify classes, objects, class members and relationships for a given problem.
	CO-2. Design end to end applications using object oriented constructs.
	CO-3. Apply collection classes for storing java objects.
	CO-4. Use Java APIs for program development.
	CO-5. Handle abnormal termination of a program using exception handling.
BCA-352 **Data Mining and Data Science**	CO-1. Identify the key processes of data mining, data warehousing and knowledge discovery.
	CO-2. Design data warehouse with dimensional modeling and apply OLAP operations
	CO-3. Identify appropriate data mining algorithms to solve real world problems.
	CO-4. Compare and evaluate different data mining techniques like classification, prediction, clustering and association rule mining.
	CO-5. Choose an appropriate method to perform exploratory analysis
	CO-6. Interpret results by carrying out data visualization and formal inference procedures
BCA-353 **Principles of Operating Systems**	CO-1. Describe, contrast and compare differing structures for operating systems.
	CO-2. Explain how processes and threads are managed, and evaluate the performance of various scheduling algorithms.
	CO-3. Understand and explain process synchronization process and deadlock handling techniques.
	CO-4. Analyze the relationship between the operating system and the hardware environment in which it runs.
	CO-5. Explain how memory is managed, and evaluate the performance of various page replacement algorithms.
	CO-6. Defining I/O systems, Device Management Policies and Secondary Storage Structure and Evaluation of various Disk Scheduling Algorithms
	CO-7. Use system calls for managing processes, memory and the file system.
BCA-354 **Artificial Intelligence**	CO-1. Apply the suitable algorithms to solve AI Problems.
	CO-2. Identify and apply suitable Intelligent agents for various AI applications.
	CO-3. Build a smart system using different informed search / uninformed searchor heuristic approaches.
	CO-4. Represent complex problems with expressive language of representation.
BCA-355 **Cloud Computing**	CO-1. Explain the core issues in cloud computing such as security, privacy, and interoperability.
	CO-2. Choose the appropriate technologies, algorithms, and approaches for the given application.
	CO-3. Compare and contrast various cloud services.