



# Bachelor of Computer Application

## PROGRAMME SPECIFIC OUTCOME

- PSO1** Create a foundation for the graduates which will act as a feeder course for higher studies in the area of Computer Science/Applications
- PSO2** Understand the concepts of computer architecture, networks, graphics and e-commerce
- PSO3** Understand the basics of computer programming and numerical analysis.
- PSO4** Apply and verify theoretical concepts through laboratory experiments

# COURSE OUTCOME

## SJBCA1B01 : COMPUTER FUNDAMENTALS & HTML

SJBCA1B01.1	To understand the basics of computer organization.
SJBCA1B01.2	Learn Number Systems and boolean algebra.
SJBCA1B01.3	To understand the fundamentals of problem solving. To learn about algorithm and flowcharts.
SJBCA1B01.4	To know the basics of Web Design and design a responsive website using HTML5.
SJBCA1B01.5	Implement interactive web page(s) using CSS.

## SJBCA2B02 : PROBLEM SOLVING USING C

SJBCA2B02.1	Understand the problem and identify the tools and programming structure to logically solve the problem
SJBCA2B02.2	Understand the basic concepts of programming language C including variables and operators.
SJBCA2B02.3	Choose appropriate conditional and iteration constructs for a given programming task.
SJBCA2B02.4	Apply the techniques of structured (functional) decomposition to break a program into smaller pieces.
SJBCA2B02.5	Understand memory management using Pointers

## SJBCA2B03 : Programming Laboratory I: HTML & Programming in C

SJBCA2B03.1	Make the students learn web designing
SJBCA2B03.2	Make the students learn programming environments.
SJBCA2B03.3	Practice procedural programming concepts.
SJBCA2B03.4	Make the students equipped to solve mathematical or scientific problems using C

## SJBCA3B04 : DATA STRUCTURES USING C

SJBCA3B04.1	Be able to implement Linear and Non-Linear data structures and analyze the time and space efficiency of the data structure
SJBCA3B04.2	Understand the concept of data structure, data types, algorithms, Big O notation.
SJBCA3B04.3	Understand basic data structures such as arrays, linked lists, stacks and queues.
SJBCA3B04.4	Implement operations like searching, sorting insertion, and deletion, traversing mechanism etc. on tree data structure
SJBCA3B04.5	Solve problem involving graphs, Sorting and hash function

## **SJBCA4B05: DATABASE MANAGEMENT SYSTEM AND RDBMS**

SJBCA4B05.1	Understand, appreciate and effectively explain the underlying concepts of database technologies
SJBCA4B05.2	Design and implement a database schema for a given problem-domain
SJBCA4B05.3	Normalize a Database
SJBCA4B05.4	Populate and query a database using SQL DML/DDDL commands.
SJBCA4B05.5	Programming PL/SQL including stored procedures, stored functions, cursors, packages.

## **SJBCA4B06 :Programming Laboratory II: Data Structures & RDBMS**

SJBCA4B06.1	Make the students equipped to solve mathematical or scientific problems using C
SJBCA4B06.2	Practice how to implement various data structures.
SJBCA4B06.3	Use opportunity to students to use data structures to solve real life problems.
SJBCA4B06.4	Populate and query a database using SQL DML/DDDL commands.

## **SJBCA5B07: Computer Organization and Architecture**

SJBCA5B07.1	To understand basic logic gates and different combinational circuits
SJBCA5B07.2	To understand basic sequential logic circuits
SJBCA5B07.3	To learn about the basic computer organization and design

SJBCA5B07.4 To learn about the basics of micro programmed control and processor organization

SJBCA5B07.5 To understand about memory organization and AC input-output organization.

## **SJBCA5B08: Java Programming**

SJBCA5B08.1 Identify and understand various Object Oriented programming concepts.

SJBCA5B08.2 Describe the features of Java, identify classes, objects, members of a class and demonstrate how to achieve reusability using inheritance, interfaces and packages.

SJBCA5B08.3 Demonstrate and understand the use of different exception handling mechanisms and concept of multithreading for robust faster and efficient application development.

SJBCA5B08.4 Identify, design & develop graphical user interfaces using Applet and understand the concept of JDBC.

SJBCA5B08.5 Identify and describe common abstract user interface components to design GUI in Java using AWT along with response to events.

## **SJBCA5B09 : Web Programming Using PHP**

SJBCA5B09.1 Write and make available to the public well formulated HTML pages with appropriate styling through CSS

SJBCA5B09.2 Identify when it is appropriate to use client side programming such as Javascript and to write simple Javascript code to make a web application interactive

SJBCA5B09.3 Understand the PHP structure

SJBCA5B09.4 Identify when it is appropriate to use server side programming such as PHP and to write simple PHP code to perform some functionality for a web application

SJBCA5B09.5 Understand Data Management

## **SJBCA5B10 : Principles of Software Engineering**

SJBCA5B10.1 Define various software application domains and remember different process model used in software development.

SJBCA5B10.2 Explain needs for software specifications also they can classify different types of software requirements and their gathering techniques.

SJBCA5B10.3	Convert the requirements model into the design model and demonstrate use of software and user interface design principles.
SJBCA5B10.4	Distinguish among SCM and SQA and can classify different testing strategies and tactics and compare them.
SJBCA5B10.5	Justify role of SDLC in Software Project Development and they can evaluate importance of Software Engineering in PLC.

## SJBCA6B11 : Android Programming

SJBCA6B11.1	Describe Android platform, Architecture and features
SJBCA6B11.2	Use Intent, Resources, Design and implement Content providers.
SJBCA6B11.3	Design User Interface and develop activity for Android App.
SJBCA6B11.4	Use multimedia, camera and Location based services in Android App.
SJBCA6B11.5	Design and implement Database Application.

## SJBCA6B12 : Operating Systems

SJBCA6B12.1	Describe the important computer system resources and the role of operating system and its types in their management policies and understand the concepts of deadlocks.
SJBCA6B12.2	Understand the basic concepts of Linux Shell Programming, evaluate and create shell programs using various commands
SJBCA6B12.3	Analyse the CPU scheduling algorithms and evaluate the requirement for process synchronization and coordination handled by operating system.
SJBCA6B12.4	Describe and analyze the memory management and identify its allocation policies with respect to different storage management technologies.
SJBCA6B12.5	Identify and understand the need for protection and security in operating systems and describe the mobile operating system concepts.

## SJBCA6B13 : Computer Networks

SJBCA6B13.1	Build an understanding of the fundamental concepts of computer networking.
SJBCA6B13.2	Understand the services of data link layer and protocols

SJBCA6B13.3	Understand the services of network layer and routing protocols
SJBCA6B13.4	Understand the services of transport layer and application layer with its protocols
SJBCA6B13.5	To understand basics of Cryptography and Network Security and also identify the importance of public and private key cryptography

### SJBCA6B14 : Programming Laboratory III: Java and PHP

SJBCA6B14.1	Practice Java programming.
SJBCA6B14.2	Practice client side and server side scripting.
SJBCA6B14.3	Practice PHP Programming.
SJBCA6B14.4	Practice developing dynamic websites.
SJBCA6B14.5	Practice how to interact with databases through PHP

### SJBCA6B15 : Programming Laboratory IV: Android and Linux Shell

SJBCA6B15.1	Practice Android programming.
SJBCA6B15.2	Practice user interface applications.
SJBCA6B15.3	Develop mobile application.
SJBCA6B15.4	Practice developing dynamic To practice shell programming.

### SJBCA6B17 : Industrial Visit and Project Work

SJBCA6B17.1	Students will discover how does web works really, what makes web sites work.
SJBCA6B17.2	Students will be able to add lists, styles and themes, linking pages, working with images to an active web page.
SJBCA6B17.3	Students are able to develop a dynamic webpage by the use of Java script and DHTML.
SJBCA6B17.4	Students will be able to write a server side Java application called JSP to catch form data sent from client and store it on database.