

***ST SOLDIER COLLEGE (CO-EDUCATION)***

***JALANDHAR***

***PROGRAM***

***AND***

***COURSE OUTCOMES***

***- BCA and DCA, PG, DCA***

***DEPARTMENT OF COMPUTER***

**Department of Computer Application**

**Session -2024-25**

**BCA**

***PO(Program Outcome)/CO(Course Outcome)/PSO(Program Specific Outcome)***

**Programme Outcomes (POs):**

Programme outcome (POs)	Description
PO1	Understand the fundamental concepts of computers (hardware , software and storage devices).
PO2	Familiarized with front end and backend of software.
PO3	Understand information technologies and its applications.
PO4	Gain Knowledge to develop computer programs.
PO5	Achieve technical skills to lead a productive life as a professional or an entrepreneur.
PO6	Achieve expertise in at least one technology .
PO7	Get knowledge about computer network, network devices and their configuration protocols.
PO8	Confidence for self and continuous learning to improve knowledge.

**Program Specific Outcomes (PSO):-**

- 1: Students will understand the latest technologies development project
- 2: Apply software engineering practices and strategies in software project development.
- 3: students will be able to understand , analyze and develop computer program.

**Course Outcomes FOR B.C.A.**

**BCA(I sem)**

**SUBJECT CODE: BCA01001T**

**Computer fundamentals and PC software**

**C01:** Understand the usage of computer.

**C02:** Understand the components of MS-Office (MS-Word, MS-PowerPoint, MS-excel).

CO3: Understand the basic knowledge of computer .

**BCA(I sem)**  
**SUBJECT CODE: BCA01005T**  
**INTRODUCTION TO THE INTERNET (SEC-1)**

- CO1: understand the concept of internet.
- CO2: understand the features of internet and web.
- CO3: understand the concept of E-mail.
- CO4: understand the concept of search engines.

**BCA(SEMESTER II)**  
**SUBJECT CODE: CSL**  
**INTRODUCTION TO PROGRAMMING USING PYTHON**

- CO1: Understand the strengths of the Python language.
- CO2: Gain proficiency in string handling, functions, and n control flow statements.
- CO3: Create and manipulate Python programs by using different data structures and object-oriented concepts.
- CO4: Understand the operations involved in creating and manipulating file systems and databases.

**BCA(SEMESTER II)**  
**SUBJECT CODE: CSL**  
**COMPUTER ARCHITECTURE**

- CO1: Explain various modes of input/output transfer, interrupt
- CO2: Explain the concepts of register with its Types.
- CO3: Knowledge of timing and control unit.
- CO4: CPU Organization
- CO5: Concept of Arithmetic and logical operations.

**BCA(SEM III)**  
**SUBJECT CODE: BCA03002T**  
**DATABASE MANAGEMENT SYSTEM**

- CO1: student will be able to evaluate the role of database management systems in information technology within an organization.
- CO2: Understand the concept of databases and data models.
- CO3: Construct the queries with relational algebra.
- CO4: Explain the concurrency control and recovery algorithm.

**BCA(SEM III)**  
**SUBJECT CODE: BCA03005T**

**MULTIMEDIA TECHNOLOGY AND APPLICATIONS**

- CO1: To provide various concepts of multimedia and its applications.
- CO2: To understand the basic concepts of Multimedia Systems.
- CO3: To learn representations, perceptions and applications of Multimedia.
- CO4: To understand the technologies behind multimedia applications

**BCA(SEM IV)**

**SUBJECT CODE: BCA04001T**

**DATA STRUCTURES AND FILE PROCESSING**

- CO1: Design simple programs to solve a problem.
- CO2: Select appropriate data structure and apply them to solve a program.
- CO3: Understand various sorting and searching algorithm.
- CO4: Use different types of linear data structure like stack and queue.
- CO5: Implement arrays and linked list.

**BCA(SEM IV)**

**SUBJECT CODE:BCA04002T**

**INFORMATION SYSTEMS**

- CO 1: understand analysis and design of structural systems by performing modern practices.
- CO 2: Work effectively on teams.
- CO 3: Communicate effectively.
- CO 4: Engage in lifelong learning.
- CO 5: Understand professional, ethical and social responsibilities.
- CO6: Plan and prepare design and construction documents, such as specifications, contracts, change orders, engineering drawings, and construction schedules.

**BCA(SEM IV)**

**SUBJECT CODE:BCA04004T**

**SYSTEM SOFTWARE**

- Co1: understand the concept of system software tools properly.
- Co2: Students should be able to design an IT infrastructure that includes devices, topologies, protocols, systems software, management, and security.
- Co3: Students should be able to identify and assess the quality attributes of a system at the architectural level.
- Co4: Students should be able to design software architecture for large-scale software systems.

**BCA(SEM V)**

**SUBJECT CODE:PAPER – I**

**SOFTWARE ENGINEERING**

- CO1: Ability to decompose the problem into various phases.

- C02:** Ability to choose appropriate model depends upon user requirement.
- C03:** Committed to quality and continuous improvement .
- C04:** Plan and prepare design construction documents like specifications, change in order and making schedule for constructions.
- C05:** Use graphic techniques to produce engineering documents.
- C06:** Select appropriate practices for project

**BCA(SEM V)**  
**SUBJECT CODE: PAPER – III**  
**OPERATING SYSTEM**

- CO1:** Understand Operating System, its structure and threads.
- CO2:** Understand the Algorithms for process Scheduling
- CO3:** Get knowledge of files and I/O management system.
- CO4:** Understand memory management techniques .

**BCA(SEM V)**  
**SUBJECT CODE: PAPER – IV**  
**JAVA PROGRAMMING LANGUAGE**

- CO 1:** Write, compile, run, and test simple object-oriented Java programs.
- CO 2:** Understand and apply in programs the concept of inheritance, package and multithreading.
- CO 3:** Develop JDBC application of elementary level.
- CO 4:** Write a static webpage using HTML. Use various tags, tables and image formats.
- CO 5:** Set up the web server. Understand HTTP and client-server architecture. Understand the potential of Servlets. Apply the methods of Servlets to retrieve and sending information, tracking session and database connectivity.
- CO 6:** Create web pages of dynamic and static nature using JSP and HTML. Create JSP forms and gather information using forms. Use JSTL and custom tag libraries.

**BCA(SEM V)**  
**SUBJECT CODE: PAPER – II**  
**WEB TECHNOLOGIES**

- CO1:** Demonstrate knowledge of the fundamental technologies used in web development, including HTML, CSS, and JavaScript.
- CO2:** Understand the architecture of web applications, including client-side and server-side programming.
- CO3:** Apply HTML and CSS to design user-friendly, responsive, and accessible web pages that work across different devices and screen sizes.
- CO4:** Use JavaScript (or libraries like jQuery) to add interactive elements to web pages, such as forms, animations, and dynamic content.

**BCA(SEM V)**  
**SUBJECT CODE: PAPER – I**  
**COMPUTER GRAPHICS**

- CO1: Understand the concept of computer graphics and multimedia with their types.  
CO2: use of geometric transformations on graphics objects.  
CO3: Explore projection techniques with 2-D and 3-D

BCA(SEM V)  
SUBJECT CODE: PAPER – II  
COMPUTER NETWORKS

- CO 1: Build an understanding of the fundamental concepts of data communication and computer networking.  
CO 2: Understand how errors detected and corrected that occur in transmission  
CO 3: How collisions to be handled when many stations share a single channel  
CO 4: Know about routing mechanisms and different routing protocols  
CO 5: Understand transport layer functions  
CO 6: Know about different application layer protocols

BCA(SEM V)  
SUBJECT CODE: PAPER – IV  
PROJECT

- Co1: Develop and implement a software solution for a real-world problem using appropriate technologies and tools.  
Co2: Design, develop, test, and deploy a fully functional system with a user-friendly interface.  
Co3: Work collaboratively in a team, applying principles of software engineering and project management.  
Co4: Demonstrate proficiency in database management, application design, and system integration.  
Co5: Produce well-documented code, project reports, and deliver professional presentations

## Career Prospects Post-BCA:

Graduates of BCA can pursue careers in:

- Software Development (Web, Mobile, Desktop)
- IT Consulting
- Database Administration
- Network Administration
- Systems Analyst
- Cyber security Expert
- Project Management
- Digital Marketing and E-commerce
- Student can do further studies like MCA or certifications in specialized areas (e.g., Cloud Computing, Data Science, AI) can also provide career advancement opportunities.

**Department of Computer Application**

**Session -2024-25**

**DCA**

***PO(Program Outcome)/CO(Course Outcome)/PSO(Program Specific Outcome)***

**Program Outcome –**

- PO1: Students will be able to understand MS-office.
- PO2: Get knowledge about database and its queries.
- PO 3: Students will easily handle MS-excell and access.

**Program Specific Outcome:-**

This program helps learners acquire required skills in Information Technology.

**COURSE OUTCOMES FOR DCA**

**DCA(SEM I)**

**SUBJECT CODE: DCA01001T**

**INFORMATION TECHNOLOGY AND OPERATING SYSTEM**

- Co1:** Students will be able to know about storage, input device and output devices.
- CO2:** Students able to know Memory, Operating system, Internet, E-commerce etc.
- CO3:** Know about different types and generations of computer.

**DCA(SEM I)**

**SUBJECT CODE: DCA01003T**

**PC COMPUTING-I**

- CO1:** Students will be proficient in using MS-OFFICE such as word processors (e.g., Microsoft Word), spreadsheets (e.g., Microsoft Excel), and presentation tools (e.g., Microsoft PowerPoint).
- CO2:** Students will be able to create, format, and edit documents, manage data in spreadsheets.

**DCA(SEM II)**

**SUBJECT CODE: DCA02003T**

**PC COMPUTING-II**

- CO1:** Understand to create table in Access.
- CO2:** Student will easily create spread sheet and perform various action on it like (making graphs, printing spreadsheet and analysing data.)

**Career Prospects Post-DCA:**

**DCA student can pursue careers in:**

- Student can do graduation in computer application.
- Database Administrator (Junior)
- Web Developer (Entry-Level)
- Office Assistant
- Data Entry Operator

## Career Prospects Post-PGDCA:

**PGDCA student can pursue careers in:**

- Government Jobs
- Job in Non-IT Industries LIKE DIGITAL MARKETING AND BUSINESS ANALYST
- Entrepreneurship Opportunities such as freelancing or start an IT firm.
- Student can do masters in computer application.
- Software Developer / Programmer
- Database Administrator (DBA)