# **Department of Computer Science**

Program & Course Outcome. (2022-23)

- 1. Discipline knowledge: Acquiring knowledge on basics of Computer Science and ability to apply to design principles in the development of solutions for problems of varying complexity
- 2. **Problem Solving**: Improved reasoning with strong mathematical ability to Identify, formulate and analyze problems related to computer science and exhibiting a sound knowledge on data structures and algorithms.
- 3. **Programming a computer**: Exhibiting strong skills required to program a computer for various issues and problems of day-to-day applications with thorough knowledge on programming languages of various levels.

Program Outcome

- 4. **Application Systems Knowledge:** Possessing a sound knowledge on computer application software and ability to design and develop app for applicative problems.
- 5. Communication: Must have a reasonably good communication knowledge both in oral and writing.
- 6. Ethics on Profession, Environment and Society: Exhibiting professional ethics to maintain the integrality in a working environment and also have concern on societal impacts due to computer-based solutions for problems.
- 7. Lifelong Learning: Should become an independent learner. So, learn to learn ability.
- 8. Motivation to take up Higher Studies: Inspiration t

### Course Outcome:

Class Bsc-I Sem (DSC)

Sub: Computer Fundamentals and Programming in C

# Course Outcome

- Confidently operate Desktop Computers to carry out computational tasks
- Understand working of Hardware and Software and the importance of operating systems
- Understand programming languages, number systems, peripheral devices, networking, multimedia and internet concepts
- Read, understand and trace the execution of programs written in C language
- Write the C code for a given problem
- Perform input and output operations using programs in C
- Write programs that perform operations on arrays

Class: BCom/BA-I Sem (OEC)
Sub: C Programming Concepts.

# Course Outcome

- 1. Read, understand and trace the execution of programs written in C language
- 2. Write the C code for a given problem
- 3. Perform input and output operations using programs in C
- 4. Write programs that perform operations on arrays
- 5. Write user defined functions to perform a task

Class Bsc-II Sem (DSC)
Sub: Data Structure



- 1. Describe how arrays, records, linked structures, stacks, queues, trees, and graphs are represented in memory and used byalgorithms
- 2. Describe common applications for arrays, records, linked structures, stacks, queues, trees, andgraphs

. 6	3. Write programs that use arrays, records, linked structures, stacks, queues, trees,
Course	andgraphs
Outcome	4. Demonstrate different methods for
	traversingtrees
	5. Compare alternative implementations of data
	structures with respect toperformance
	6. Describe the concept of recursion, give
	examples of itsuse
al standards (me)	7. Discuss the computational efficiency of the
1. T. V. M.	principal algorithms for sorting andsearching

Class BA/BCOM II Sem (OEC)

Sub: Web Designing

Course Outcome	<ol> <li>Read, understand and trace the execution of programs</li> <li>Write the code for a given problem</li> <li>Perform input and output operations using programs</li> <li>Write user defined functions to perform a task</li> </ol>

Class Bsc-III Sem (DSC)

Sub: Object Oriented Programming Concepts and Programming in Java

	1. Object-oriented concepts and JAVA.
	2. Write JAVA programsusing OOP concepts like
Course	Abstraction, Encapsulation, Inheritance and
Outcome	Polymorphism.
	3. Implement Classes and multi threading using JAVA.
	4. DemonstratethebasicprinciplesofcreatingJava
N	applicationswithGUI.

Class BCom/BA-III Sem (OEC)

Sub: Python Programming Concepts.

3.	1. Explain the fundamentals of Computers.
	2. Explain the basic concepts of Python Programming.
Course Outcome	3. Demonstrate proficiency in the handling of loops and the creation of functions.
	4. Identify the methods to create and store strings.

# Class BSc-IV Sem (DSC)

Sub: Database Management System.

	1. Identify and define database objects, enforce integrity constraints
Par Spire and John Spire	ona database using DBMS.
	2. Demonstrate Data model and Schemas in RDBMS.
	3. Identify entities and relationships and draw ER diagram for a
Course	given real-world problem.
Outcome	4. Convertan ER diagram to a database schema and deduce it to the
	desired normal form.
	5. Formulate queries in Relational Algebra, Structured Query
	Language(SQL)fordatabasema
	6. nipulation.
	7. Explain the transaction processing and concurrency control
a to grade a sugar	techniques.

# Class BA-II, BCom/BSc-I, (SEC)

Sub: Digital Fluency

	• To perform and get knowledge about applications, virtual learning and internet fundamentals.
Course Outcome	• Develop holistically by learning essential skills such as effective communication, problem- solving, design thinking, and teamwork.

©Class BA-III, BCom/BSc-IV, (SEC)

Sub: Artificial Intelligence

	<ol> <li>Appraise the theory of Artificial intelligence and list the significance of AI.</li> <li>Discuss the various components that are in volved in solving</li> </ol>
Course Outcome	an AI problem.  3. Illustrate the working of AI Algorithms in the given contrast.
	4. Analyze the various knowledge representation schemes, Reasoning and Learning techniques of AI.

5. Applythe Alconcepts to build an expert system to solve the real-world problems.

### Class BSc-V

Sub: Paper -II Java Programming.

	1. Explain the object-oriented conceptsand JAVA.
	2. Write JAVA programs using OOP concepts like
Course	Abstraction, Encapsulation, Inheritance and
Outcome	Polymorphism.
	3. Implement Classes and multi threading, creating Java
1 4 th property	applications with GUI.

## Class BSc-V

Sub: Paper-I Computer Networks

TOTAL STREET	rankouragen programme en
A STATE OF SALE	1. Understanding Data communication,
Course	2. Layers of Network.
Outcome	3. Switching: Circuit-switched networks, datagram
	networks, virtual-circuit networks, structure of a
7.56	4. switch. Telephone networks, dialup modems, digital
Prince The	subscriber line, cable-TV networks.
i janabalana	5. Detection and Correction: Errors, redundancy,
	detection versus correction, block coding, linear
144	6. block codes, cyclic codes, checksum.
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lass BSc-V (SEC)

Sub: Fundamental of e-governance

- 1. E-Government and E-Governance, Stages of E-Governance, National EGovernance
- 2. Plan (NeGP), Mission Mode Projects and their implementation status, E-Governance,
- 3. Identifying Role of ICT's in e-governance, Need, importance of E-governance.

# Course Categories Key Issues of E-Governance, Technology, Policies, Infrastructure, Training, Copyrights, Consulting Funds, E-governance Models, Model of Digital Governance, Public information:employment, hospitals, railway, Agricultural sector: Fertilizers, Seeds, Utility payments Electricity, water, telephone.

# Class BSc-VI

Sub: Paper I Web Designing

	JDBC-Setting the JDBC connectivity with a backend database.
	Exceptional handling, built in objects, cookies, events, dynamic HTML with Java Script.
	Creation of HTML and Style sheets. Cascading style
Course	sheets(CSS), properties and values in styles, formatting blocks of information,
Outcome	Design of CSS2, styling for paged media, using aural
	presentation, counters and numbering.
	Developing CGI application, processing CGI, CGI.
	1. Understanding Data communication,
	2. Layers of Network.
	3. Switching: Circuit-switched networks, datagram networks, virtual-circuit networks, structure of a
	4. switch. Telephone networks, dialup modems, digital
	subscriber line, cable-TV networks.
	5. Detection and Correction: Errors, redundancy, detection versus correction, block coding, linear
	6. block codes, cyclic codes, checksum.



Class BSc-VI

Sub: Paper II Python

	1. Working with python, Variables, expressions, and
	statements, accepting
	user input, Conditional execution, Alternative
	execution, Chained conditionals, Nested
	conditionals, Iteration,
	2. Working with Function Basics- Built-in Functions.
Course	3. Working with functions as objects, map() function,
Outcome	Strings, indexing, Slicing,
	Exception: Exceptions in Python, Handling
	Exceptions: try block, except block, else block, finally
	block, Raising an exception, User defined exception,
	Assertions. Object-Oriented Programming:
	4. Database connectivity in Python.

Class BSc-VI (SEC)

Sub: Cyber Laws

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