



**PSGR
Krishnammal College for Women**



Affiliated to Bharathiar University \ Autonomous \ College of Excellence \ Accredited with A++ Grade \ Ranked 9th in NIRF

DEPARTMENT OF COMPUTER SCIENCE

CHOICE BASED CREDIT SYSTEM (CBCS) & LEARNING OUTCOMES BASED CURRICULUM FRAMEWORK (LOCF)

BACHELOR OF COMPUTER SCIENCE 2025 - 2028 BATCH



PSGR
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Programme Learning Outcomes

After completion of the programme, the student will be able to

- PLO1** : Demonstrate a solid foundation in the discipline of computer science and computer-based problem-solving skills
- PLO2** : Formulate, model, design and solve real world problems by using software tools
- PLO3** : Apply cognitive, design thinking and critical problem-solving skills to establish a productive career in industry, research and academia
- PLO4** : Meet the demands of IT industry with hands-on experience on current technological tools, effective communication skills and team work
- PLO5** : Pursue higher studies/ employ themselves either as software professionals or entrepreneurs through their technical competencies

Programme Specific Outcomes

The students at the time of graduation will

- PSO1** : Apply domain knowledge and problem-solving skills to solve real-time problems and to work independently on software projects as an effective team member
- PSO2** : Design and develop applications in the areas like artificial intelligence and machine learning algorithms, networking, web design, cloud computing, IoT and data analytics



**BACHELOR OF COMPUTER SCIENCE
CHOICE BASED CREDIT SYSTEM (CBCS)
LEARNING OUTCOMES - BASED CURRICULUM FRAMEWORK (LOCF)
SYLLABUS & SCHEME OF EXAMINATION
2025 – 2028 BATCH
SEMESTER I**

Semester	Part	Course Code	Title of Course	Course Type	Instruction hours / week	Contact Hours	Tutorial Hours	Duration of Examination	Examination Marks			Credits
									CA	ESE	Total	
I	I	TAM2501A/ HIN2501A / FRE2501A	Tamil Paper I/ Hindi Paper I/ French Paper I	L	4	58	2	3	25	75	100	3
I	II	ENG2501A	English Paper I	E	4	58	2	3	25	75	100	3
I	III	CS23C01	Programming in C	CC	4	58	2	3	25	75	100	3
I	III	PP22C02	Computational and Algorithmic Thinking for Problem Solving	CC	3	45	-	-	100	-	100	3
I	III	CS23C03	Computer Organization and Architecture	CC	4	58	2	3	25	75	100	3
I	III	TH24A03	Numerical and Statistical Techniques	GE	6	88	2	3	25	75	100	5
I	III	CS23CP1	C Programming Lab	CC	3	45	-	3	15*	35*	50	2
I	IV	NME25B1 / NME25A1	Basic Tamil I / Advanced Tamil I	AEC	2	28	2	-	100	-	100	2
I	IV	NME23ES	Introduction to Entrepreneurship	AEC	2	30	-	-	100	-	100	2
I-II	VI	NM25GAW	General Awareness	AEC	SS	-	-	-	100	-	100	Gr
I-II	VI	COM25SER	Community Services 30 Hours	GC	-	-	-	-	-	-	-	-
I – V	VI	24BONL1 24BONL2 24BONL3	Online Course I Online Course II Online Course III	ACC	-	-	-	-	-	-	-	-

*CA conducted for 25 and converted into 15, ESE conducted for 75 and converted into 35

CC	Core Course	AECC	Ability Enhancement Compulsory Course
GE	Generic Elective	SS	Self-Study
AEC	Ability Enhancement Course	ACC	Additional Credit Course
CA	Continuous Assessment	Gr.	Grade
ESE	End Semester Examination		

Course Code	Course Title	Category	L	T	P	Credit
CS23C01	Programming in C	Theory	58	2	-	3

Preamble

This course introduces fundamental programming constructs in C. It covers the concepts such as arrays, functions, structures, pointers and file handling. It provides comprehensive coverage on industry 4.0.

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Recall the programming constructs and structure of C programming and Industry 4.0 technologies	K1
CLO2	Understand the purpose of arrays, strings, structures, pointers, and files to solve problems	K2
CLO3	Apply functions to solve problems using procedure-oriented approach	K3
CLO4	Analyze the problems and solve it by applying appropriate logic	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	M
CLO2	S	S	S	M	S
CLO3	S	M	S	S	M
CLO4	S	S	S	S	S

S-Strong; M-Medium.

Programming in C - CS23C01-(58 Hrs)

Unit I

12 Hrs

Overview of C -Constants, Variables and Data Types - Operators and Expressions - Managing Input and Output Operations - Decision Making and Branching - Decision Making and Looping.

Unit II

12 Hrs

Arrays: One-Dimensional - Two Dimensional - Multidimensional Arrays. Character Arrays and Strings: Declaring and Initializing String Variables - Reading Strings from Terminal - Writing Strings to Screen - String Handling Functions.

Unit III

12 Hrs

User-Defined Functions: Need -Return Values and Types - Function Calls - Function Declaration - Category of Functions - No Arguments and No Return Values - Arguments but No Return Values - Arguments with Return Values - Recursion - Scope Visibility and Life Time of Variables. Structure Definition: Structure Initialization - Comparison of Structure Variables - Arrays of Structures - Arrays within Structures.

Unit IV**12 Hrs**

Pointers: Understanding Pointers - Accessing the Address of a Variable - Declaring and Initializing Pointers - Accessing a Variable through its Pointers - Pointers and Arrays - Pointers and Character Strings - Pointers and Functions.

File Management in C: Defining and Opening a File - Closing File - I/O Operations on Files - Error Handling during I/O Operations - Command Line Arguments.

Unit V**10 Hrs**

Introduction to Industry 4.0 - Need - Reasons for Adopting Industry 4.0 - Definition - Goals and Design Principles - Technologies of Industry 4.0- Skills required for Industry 4.0 - Advancements in Industry 4.0 - Impact of Industry 4.0 on Society, Business, Government and People - Introduction to 5.0.

Text Book

S. No	Author	Title of the Book	Publisher	Year and Edition
1	E. Balagurusamy	Programming in ANSI C	Tata Mc Graw Hill	2023, 9 th Edition
2	P. Kaliraj, T. Devi	Higher Education for Industry 4.0 and Transformation to Education 5.0	CRC Press - Taylor & Francis Group	2022, 1 st Edition

Reference Books

S. No	Author	Title of the Book	Publisher	Year and Edition
1	Byron Gottfried	Programming with C	Tata McGraw Hill	2018, 4 th Edition
2	Yashwanth Kanetkar	Let Us C: Authentic Guide to C Programming Language	BPB Publications	2023, 20 th Edition

Pedagogy

- Lectures, Group discussions, Demonstrations

Course Designer

- Dr. K. Padmavathi

Course Code	Course Title	Category	L	T	P	Credit
PP22C02	Computational and Algorithmic Thinking for Problem Solving	Theory	45	-	-	3

Preamble

This course aims to kindle the young minds to think like a computer scientist, with the idea that Computing, and computers will enable the spread of computational thinking. Computational thinking is thinking recursively, reformulating a seemingly difficult problem into one which we know how to solve and taking an approach to solving problems, designing systems, and understanding human behaviour that draws on concepts fundamental to computer science.

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Define the basic principles of logical reasoning, problem solving in computational thinking	K1
CLO2	Understanding the applications of propositional logic, problem representation and techniques	K2
CLO3	Apply algorithmic thinking to problem solving using tools	K3
CLO4	Apply and analyze to solve domain specific problems using computational thinking concepts	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	M	S	S	S	S
CLO2	S	S	S	M	S
CLO3	S	M	S	S	S
CLO4	S	S	M	S	S

S-Strong; M-Medium.

Computational and Algorithmic Thinking for Problem Solving - PP22C02 -(45 Hrs)

Unit I

7 Hrs

Basics: Introduction to Computational Thinking - Data Logic - History of Computational Thinking-Applications of Computational Thinking.

Unit II

8 Hrs

Data- Information and Data - Data Encoding - Logic - Boolean logic - Applications of simple Propositional Logic. Tool: Flowgorithm and Scratch.

Unit III

10 Hrs

Problem Solving and Algorithmic Thinking: Problem definition- Logical reasoning- Problem decomposition- Abstraction- Problem representation via Algorithmic thinking: Name binding- Selection-Repetition and Control Abstraction - Simple Algorithms - Comparison of performance of Algorithms.

Unit IV**8 Hrs**

Activities in Class: Sudoku-Towers of Hanoi- Graph Coloring-Geographical Map reading- Poem reading-Novel reading- Data analysis on news.

Unit V**12 Hrs**

Problem Solving Techniques- Factoring and Recursion Techniques- Greedy Techniques-Divide and Conquer- Search and Sort Algorithms- Text Processing and Pattern matching. Tool: iPython

Text Book

S. No	Author	Title of the Book	Publisher	Year and Edition
1	David Riley and Kenny Hunt	Computational Thinking for Modern Solver	Chapman & Hall/CRC	2014, 1 st Edition
2	Paolo Ferragina, Fabrizio Luccio	Computational Thinking First Algorithms	Springer	2018, 1 st Edition
3	Karl Beecher	Computational Thinking - A beginner's guide to problem solving	BSC publication	2017, 1 st Edition

Pedagogy

- Lectures, Group discussions, Demonstrations, Case studies

Course Designer

- Mrs. S. Kavitha

Evaluation Pattern

Assessment	Number	Marks
Quiz (online or offline)	5	50
Class Activity	5	25
Group Project (Domain Specific)	1	25
Total		100

Course Code	Course Title	Category	L	T	P	Credit
CS23C03	Computer Organization and Architecture	Theory	58	2	-	3

Preamble

This course provides the principles and practices of digital electronics and computer system. It covers data transfer techniques, computer arithmetic operations, I/O and memory organization.

Course Learning Outcomes

On the success completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand number systems, conversions, boolean algebra and karnaugh map	K1
CLO2	Differentiate the functioning of flip-flops, multiplexer and decoder	K2
CLO3	Illustrate the concepts of register transfer, micro-operation, arithmetic operations, addressing modes and instruction format	K3
CLO4	Analyze various I/O and memory organizations	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	M	S	S
CLO2	S	S	S	S	M
CLO3	S	M	S	S	S
CLO4	S	S	S	S	S

S- Strong; M-Medium.

Computer Organization and Architecture - CS23C03 - (58 Hrs)

Unit I

12 Hrs

Data Representation: Data Types - Number Systems: Octal & Hexadecimal Numbers, Decimal Representation, Alphanumeric Representation. Logic Circuits: Gates - AND, OR, NOT, NAND, NOR Gates and Truth Tables - Boolean Algebra.

Unit II

12 Hrs

Flip Flops: SR, JK, D, T Flip Flops. Karnaugh Maps - Product of Sums Method - Sum of Products Method- Don't Care Condition - Decoders-Multiplexer -Demultiplexer.

Unit III

11Hrs

Register Transfer and Micro Operations: Register Transfer Language - Register Transfer-Bus and Memory Transfers - Arithmetic Micro Operations-Logic Micro Operations - Shift Micro Operation. Instruction Format: Three Address Instruction-Two Address Instruction-One Address Instruction-Zero Address Instruction.

Unit IV

12Hrs

Input / Output Organization: Input Output Interface - Asynchronous Data Transfer - DMA. Memory Organization: Memory Hierarchy - Main Memory - Cache Memory - Virtual Memory.

Unit V**11 Hrs**

Case study: 32bit /64bit processor architecture, Next generation computer architecture: Introduction to Graphics Processing Units (GPU) -CPU and GPU difference - Quantum Computers – Neuromorphic chips.

Text Book

S. No	Author	Title of the Book	Publisher	Year and Edition
1	M Morris Mano	Computer System Architecture	Pearson Education	2017, 3 rd Edition
2	Jim Ledin	Modern Computer Architecture and Organization: Learn x86, ARM, and RISC-V architectures and the design of smartphones, PCs, and cloud servers	Packt Publishing Limited	2020, 1 st Edition

Reference Books

S. No	Author	Title of the Book	Publisher	Year and Edition
1	Yale N. Patt & Sanjay Patel	Introduction to Computing Systems: From Bits and Gates to C and Beyond	McGraw-Hill Education	2019, 3 rd Edition
2	John.L. Hennessy	Computer Architecture - A Quantitative approach	Elsevier	2018, 6 th Edition
3	William Stallings	Computer Organization & Architecture	Pearson Education	2022, 11 th Edition

Pedagogy

- Lectures, Group discussions, Demonstrations

Course Designer

- Mrs. M. Dhivya

Course Code	Course Title	Category	L	T	P	Credit
CS23CP1	C Programming Lab	Practical	-	-	45	2

Preamble

The lab course provides a way to explore the C programming constructs. It enables to experience pointers, structures and file handling techniques through simple programs.

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the basic programming in C language	K1
CLO2	Differentiate built-in functions and apply user defined functions to solve problems	K2
CLO3	Demonstrate the concepts of arrays, strings, pointers, structures	K3
CLO4	Design and develop the programs to solve real-world problems	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	M	S	S	S
CLO2	S	S	S	M	S
CLO3	M	M	S	S	M
CLO4	S	S	M	M	S

S- Strong; M-Medium.

C Programming Lab -CS23CP1-(45 Hrs)

List of Programs

- Exercise using different data types
- Exercise using different operators
- Exercise to implement control structures
- Exercise using loop statements
- Exercise using arrays
- Exercise to explore built-in functions
- Exercise to create user defined function
- Exercise using structures
- Exercise using pointers
- Exercise to work with files

Pedagogy

- Demonstration of working environment / Tools / Software / Program

Course Designer

- Mrs. K. Padmavathi



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CHOICE BASED CREDIT SYSTEM (CBCS)
LEARNING OUTCOMES - BASED CURRICULUM FRAMEWORK (LOCF)
SYLLABUS & SCHEME OF EXAMINATION
2025 – 2028 BATCH
SEMESTER II

Semester	Part	Course Code	Title of the Course	Course Type	Instruction Hours / Week	Contact Hours	Tutorial Hours	Duration of Examination	Examination Marks			Credits
									CA	ESE	Total	
II	I	TAM2502A/ HIN2502A / FRE2502A	Tamil Paper II / Hindi Paper II / French Paper II	L	4	58	2	3	25	75	100	3
II	II	ENG2502A	English Paper II	E	4	58	2	3	25	75	100	3
II	III	CS24C04	Java Programming	CC	5	73	2	3	25	75	100	3
II	III	CS24C05	Data Structures	CC	4	58	2	3	25	75	100	3
II	III	TH24A11	Discrete Mathematics	GE	6	88	2	3	25	75	100	5
II	III	CS25CP2	Java Programming Lab	CC	5	75	-	3	*15	*35	50	3
II	IV	# NME25B2/ NME25A2	Basic Tamil II / Advanced Tamil II	AEC	-	-	-	-	100	-	100	Gr.
II	IV	NM25UHR	Universal Human Values and Human Rights	AEC	2	30	-	-	100	-	100	2
I-II	VI	NM25GAW	General Awareness	AECC	SS	-	-	-	100	-	100	Gr.
I-II	VI	COM25SER	Community Services 30 Hours	GC	-	-	-	-	-	-	-	-
I-V	VI	24BONL1 24BONL2 24BONL3	Online Course I Online Course II Online Course III	ACC	-	-	-	-	-	-	-	

*CA conducted for 25 and converted into 15, ESE conducted for 75 and converted into 35

After Class Hours

AECC	Ability Enhancement Core Course	L	Language
AEC	Ability Enhancement Course	E	English
ESE	End Semester Examination	CC	Core Course
CA	Continuous Assessment	GE	Generic Elective
ACC	Additional Credit Course	SS	Self-Study
GC	General Courses	Gr.	Grade

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
CS24C04	JAVA PROGRAMMING	THEORY	73	2	-	3

Preamble

The course introduces object-oriented programming concepts and it covers arrays, strings, threads, interfaces, files and exceptions. It introduces collection framework and database connectivity.

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Recall the object-oriented concepts, programming constructs in Java	K1
CLO2	Understand the usage of various packages, classes and collections in Java to solve problems	K2
CLO3	Apply Java APIs to solve problems using object-oriented approach	K3
CLO4	Analyze the problems and solve it by applying appropriate logic using Java language	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	M	S	S	S
CLO2	S	S	S	M	S
CLO3	M	M	S	M	S
CLO4	S	S	S	M	S

S- Strong; M-Medium.

JAVA PROGRAMMING - CS24C04-73 HRS

Unit I

(14 Hrs)

Introduction to Java - Naming conventions and data types - Literals - Operators in Java -Control statements in Java- Implementing Efficient Encryption Algorithms using Vedic Sutras -Classes and objects- Instance variables, set Methods and get methods - Initializing objects with constructors.

Unit II

(15 Hrs)

Arrays - String, String Buffer and StringBuilder Class - Inheritance: Inheritance - super keyword - Protected Specifier - Types of Inheritance - Polymorphism - Type Casting - Abstract Classes- Generating Binary Sequences with Pingala's Chandas sutra Algorithm.

Unit III

(14 Hrs)

Interface: Interface -Multiple Inheritance using Interfaces - Abstract Classes Vs Interfaces. Packages: Package - Different Type of Package - JAR files -Creating Sub-Package - Exception Handling - Wrapper Classes- Streams and Files -Threads.

Unit IV**(15 Hrs)**

Collection Framework: Collection Objects -Retrieving Elements from Collections – Hash Set-Linked List- Array List- Vector –Hash Map-Hash table- Arrays - String Tokenizer - Calendar - Date Class.

Unit V**(15 Hrs)**

Java Database Connectivity: Database Server - Database Clients - JDBC - Working with Oracle DB - Registering the Driver - Connecting to a Database - Preparing SQL Statements - Using JDBC- ODBC Bridge Driver to Connect to Oracle Database - Types of Result Sets.

Text Book

S. No	Author	Title of the Book	Publisher	Year and Edition
1	R.Nageswara Rao	Core Java - An Integrated Approach	Dream Tech	2024
2	Paul Deitel and Harvey Deitel	Java How to Program	PHI Learning Pvt Ltd	2018 and 11 th Edn.

Reference Books

S.No	Author	Title of the Book	Publisher	Year and Edition
1	Herbert Schildt	Java: The complete Reference	McGraw Hill Professional	2017
2	Robert Sedgewick& Kevin Wayne	Introduction to Programming in Java	Addison Wesley	2017
3	Y. Daniel Liang	Introduction to Java Programming	Pearson Education	2017

Pedagogy

- Lectures, Group discussions, Demonstrations

Course Designer

- Dr. S. Karpagavalli
- Mrs. A. Priyadharsini

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
CS24C05	DATA STRUCTURES	THEORY	58	2	-	3

Preamble

This course covers the basic concepts, terminologies in data structure. It provides knowledge on data representation, storage and retrieval in various data structures as well as sorting and searching techniques.

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Recall the basic data structures and data representations	K1
CLO2	Understand different data structures, operations and applications	K2
CLO3	Apply specific data structures like stack, queue, linked list, trees, and graph to solve problems	K3
CLO4	Analyze and evaluate the use of data structures in computerized problem solving	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	M	S	S	S	S
CLO2	S	S	S	M	S
CLO3	M	S	S	M	S
CLO4	S	M	S	M	M

S-Strong; M-Medium.

DATA STRUCTURES- CS24C05 - 58 HRS

Unit I

(12 Hrs)

Introduction and Overview: Introduction - Basic Terminology - Elementary Data Organization - Data structures - Data structure operations - Algorithms: Complexity, Time- Space Trade-off. Preliminaries: Algorithmic Notation - Control Structures- Variables, Data Types. Arrays, Records and Pointers: Introduction - Linear Arrays – Operations in Linear Arrays.

Unit II

(12 Hrs)

Stack, Queues, Recursion: Introduction -Stacks - Array Representation of Stacks - Linked Representation of Stacks - Arithmetic Expressions - Polish Notation - Recursion- Towers of Hanoi - Implementation of Recursive Procedures by Stacks -Queues - Linked Representation of Queues – Circular Queue - Dequeue – Priority Queue.

Unit III

(11 Hrs)

Linked Lists: Introduction - Linked Lists - Representation of Linked Lists in Memory- Traversing a Linked List - Memory Allocation-Garbage Collection–Insertion in Linked List- Deletion from a Linked List - Header Linked Lists– Circular Linked List.

Unit IV**(12 Hrs)**

Trees: Introduction - Binary Trees - Representing Binary Trees in Memory - traversing binary trees - AVL Tree - B Tree - Panini's Grammar and Pattern Matching (Syntax Trees). Graphs: Terminology and Representations- Sequential Representation of Graphs- Adjacency Matrix, Path Matrix – Graph Traversal –Mandala Pattern and Graph Theory- Shortest Path Problems - Spanning Trees.

Unit V**(11 Hrs)**

Sorting and Searching: Introduction - Sorting - Insertion Sort - Selection Sort - Merging - Merge Sort - Radix Sort -Bubble Sort-Quick Sort. Searching and Data Modification – Hashing - Linear Search – Binary Search.

Text Book

S. No	Author	Title of the Book	Publisher	Year and Edition
1	Seymour Lipschutz	Data Structures	Tata Mc-Graw Hill	2017 and 5 th Edn.

Reference Books

S. No	Author	Title of the Book	Publisher	Year and Edition
1	Ellis Horowitz Sartaj Sahni	Fundamentals of Data Structures	Galgolia Book House	2014
2	Harry Hariom Choudhary	Data Structures	Create Space Independent Publishing Platform	2014
3	Rajdev Tiwari and Nagesh Sharma	Design and Analysis Algorithms	Pearson Education	2014

Pedagogy

- Lectures, Demonstration, Case studies

Course Designer

- Dr. K. Padmavathi

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
CS25CP2	JAVA PROGRAMMING LAB	PRACTICAL	-	-	75	3

Preamble

The lab course is intended to explore object-oriented concepts through Java programming language. It enables to develop Java programming skills in packages, files, collection framework classes and database connectivity.

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the object-oriented concepts through java programming constructs	K2
CLO2	Demonstrate principle of inheritance, interface, file and exception handling	K3
CLO3	Implement data structures using Java collection framework	K3
CLO4	Construct database connectivity applications	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	M	S	S	S
CLO2	S	S	S	M	S
CLO3	M	M	S	M	S
CLO4	S	S	S	M	S

S- Strong; M-Medium.

JAVA PROGRAMMING LAB - CS25CP2 -75 HRS

List of Programs

- Exercises using classes and objects
- Exercises using demonstrating String Tokenizer
- Exercises using inheritance
- Exercises using interfaces
- Exercises using packages and sub-packages, including JAR file creation
- Exercises to implement built-in and user defined exception handling
- Exercises using streams and files
- Exercises using collection framework - Stack and Queue class
- Exercises using collection framework – LinkedList and ArrayList
- Exercises using collection framework – HashMap and Hashtable
- Exercises using insertion sort using ArrayList and heap sort using PriorityQueue
- Exercises using collection framework - Date and Calendar class

- Exercises using JDBC
- Exercises using retrieve and display updatable ResultSets

Pedagogy

- Demonstration of working environment / Tools / Software / Programs

Course Designers

- Dr. S. Karpagavalli
- Mrs. A. Priyadarshini