K L Deemed to be University
CSE-3 -- KLVZA
Course Handout
2025-2026, Odd Sem

Course Title	:OBJECT ORIENTED PROGRAMMING
Course Code	:24SC2006
L-T-P-S Structure	: 3-0-2-2
Pre-requisite	:
Credits	: 4.5
Course Coordinator	:Venkata Suresh Reddy Bhavanam
Team of Instructors	:
Teaching Associates	:

Syllabus : Module 1 (Java Fundamentals, Core APIs & Control Structures): Understanding Object oriented programming paradigm vs Structured paradigm, Key Features of Java, JDK, JRE and JVM, Data types, Type conversion and casting, Equivalent Wrapper classes for the existing primitive datatypes, Autoboxing and unboxing, Operators, Method declaration and syntax, String,StringBuilder, StringBuffer, String immutability, String methods, Legacy classes: Date, Calendar, Modern API (java.time) – LocalDate, LocalTime, LocalDateTime, Period, Duration, DateTimeFormatter, Conditional statements, Control Statements, Branching statements,Arrays (1D and 2D). Module 2 (Object-Oriented Programming and Advanced Features): Class, Object, Constructors – default, user-defined and parametrized, Constructor chaining, this keyword, static keyword, final keyword, Encapsulation, Packages and Access Modifiers, Inheritance: single, multilevel, overriding, super keyword, aggregation vs composition, Interfaces, abstract classes, dynamic binding (polymorphism). Module 3 (Exception Handling, Collections, Functional Programming): Exception hierarchy, checked/unchecked, try-catch-finally blocks, throwing exceptions(throw, throws), Custom exception creation and usage, Collections: ArrayList, LinkedList, HashSet, HashMap, Queue, Generics: class/method definitions, bounded types Comparator and Comparable; custom sorting Lambda expressions and functional interfaces (Predicate, Consumer) Java Stream API: map, filter, reduce, collect, Group by & Partitioning in Stream API. Module 4 (Concurrency, I/O streams): Java threads: extending Thread, Implementing Runnable, Thread lifecycle, Context switching, Concurrent vs parallel execution, synchronization, Thread Operations: start(), run(), sleep(), join(), yield(), Reentrant Locks, Blocking queues, Deadlock detection and Avoidance, File I/O, Byte Streams, Character Streams, Object serialization

Text Books :1. Java: The Complete Reference, 13th Edition, Herbert Schildt, McGraw-Hill.

Reference Books :1. OCP Oracle Certified professional Java SE 21 Developer Study Guide, Scott Selikoff, Jeanne Boyarsky, Wiley. 2. Effective Java, 3rd Edition, Joshua Bloch, Addison-Wesley. 3. Modern Java in Action Raul-Gabriel Urma, Mario Fusco, Alan Mycroft, Manning Publications. 4. Java Concurrency in Practice, Brian Goetz, Addison-Wesley.

MOOCS :1. https://www.coursera.org/specializations/java-programming 2. https://www.udemy.com/course/java-certification-exam-prep-oca-1z0-808-ocp-1z0-829/?couponCode=LEARNNOWPLANS 3. https://www.udemy.com/course/java-the-complete-java-developer-course/ 4. https://www.coursera.org/specializations/object-oriented-programming 5. https://www.udemy.com/course/java-multithreading-concurrency-performance-optimization/

Course Rationale : The Object-Oriented Programming (OOP) course is designed to equip students with foundational and advanced principles of modular, reusable, and maintainable software development using real-world modeling techniques. By emphasizing key concepts such as encapsulation, inheritance, polymorphism, and abstraction, the course prepares learners to design robust and scalable applications in modern programming environments.

Course Objectives :1) Understand and apply object-oriented principles such as encapsulation, inheritance, polymorphism, and abstraction to develop modular Java applications. 2) Demonstrate the use of core Java features including data types, control structures, exception handling, collections, generics, and I/O operations to build efficient and type-safe programs. 3) Gain hands-on experience in advanced Java capabilities like multithreading, functional programming (lambdas, streams), and modern date-time APIs to solve concurrent and data-driven problems.

COURSE OUTCOMES (COs):

CO NO	Course Outcome (CO)	PO/PSO	Blooms Taxonomy Level (BTL)
CO1	Apply foundational Java programming concepts including data types, operators, control flows, text processing, and date-time handling.	PO2,PSO1,PO1	3
CO2	Implement modular object-oriented Java programs using inheritance, polymorphism, encapsulation, and abstraction.	PO1,PO2,PO3,PSO1,PSO2	3
CO3	Use exception handling, collections, generics, and functional programming to build efficient Java applications.	PO2,PO3,PO5,PSO1,PSO2	3
CO4	Demonstrate concurrency and I/O operations in scalable and localized Java applications.	PO3,PSO2,PSO1,PO5	3
CO5	Apply object-oriented design, collections, exception handling, and file I/O in Java-based project development.	PO3,PO4,PO5,PSO1,PSO2	3
CO6	Implement object-oriented design patterns and principles to develop reusable solutions in open-source projects.	PO2,PO3,PO6,PO12,PSO2	3

COURSE OUTCOME INDICATORS (COIs)::

Outcome No.	Highest BTL	COI-2	COI-3
CO1	3	**Btl-2** Understand the fundamental differences between object-oriented and structured paradigms. Explain the core components of Java like JVM, JDK, and JRE, along with concepts such as data types, type conversion, and the use of String and Date-Time APIs.	**Btl-3** Apply control and branching statements, arrays, and operators to build structured logic in Java. Develop basic programs using String manipulation, wrapper classes, and modern Date-Time APIs.
CO2	3	**Btl-2** Understand the principles of class design, object instantiation, constructor types, and access control using modifiers and keywords like this, static, and final. Explain the concepts of inheritance, polymorphism, abstraction, and encapsulation.	**Btl-3** Apply object-oriented concepts to create modular and extensible Java programs. Implement inheritance, interface-based design, and use constructor chaining and aggregation to model real-world relationships.
CO3	3	**Btl-2** Understand Java's exception handling model including checked/unchecked exceptions and the role of try-catch-finally constructs. Explain the structure and utility of core collections, generics, and functional interfaces.	**Btl-3** Apply exception handling mechanisms to write robust and fault-tolerant programs. Develop applications using Java Collections, generics, lambda expressions, and Stream API for efficient data processing and transformation.
CO4	3	**Btl-2** Understand the lifecycle of threads, concepts of synchronization, and the differences between concurrent and parallel execution. Explain the architecture of Java I/O streams including byte, character, and object streams.	**Btl-3** Apply multithreading and synchronization techniques to manage concurrent tasks in Java applications. Implement file handling and serialization logic to enable persistent data storage and retrieval.
CO5	3		**Btl-3** Apply core Java features, object-oriented principles, exception handling, collections, functional programming constructs, multithreading, and file I/O operations to develop modular, efficient, and concurrent

				Java applications that solve real-world problems.
CO6	3			**Btl-3** Apply object-oriented programming concepts, core Java APIs, exception handling, collections framework, multithreading, and file handling techniques to design and develop practical Java solutions for real-world problem scenarios.

PROGRAM OUTCOMES & PROGRAM SPECIFIC OUTCOMES (POs/PSOs)

Po No.	Program Outcome

Lecture Course DELIVERY Plan:

Sess.No.	CO	COI	Topic	Book No[CH No][Page No]	Teaching-Learning Methods	EvaluationComponents
1	CO1	COI-2	Course Handout, Introduction to Java, OOP vs Structured Paradigm, Features of Java	Textbook, Chapter 1, Page 3-21	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1,Skill In-Sem Exam
2	CO1	COI-2	JVM, JRE, JDK, Compilation and Execution Process	Textbook, Chapter 1, Page 3-21	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
3	CO1	COI-2	Data Types, Type Conversion and Casting	Textbook, Chapter 3, Page 41-67	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
4	CO1	COI-2	Wrapper Classes, Autoboxing and Unboxing	Textbook, Chapter 19, Page 522-539Chapter 12, Page 293-297	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
5	CO1	COI-2	Operators and Expressions	Textbook, Chapter 4, Page 69-82	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
6	CO1	COI-3	Method Declaration, Syntax, Parameters, Return types	Textbook, Chapter 5, Page 89-92	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
7	CO1	COI-3	String Handling – String, StringBuilder, StringBuffer, Immutability	Textbook, Chapter 18, Page 494-519	Chalk,LTC,Talk	ALM,End Semester Exam,SEM-EXAM1
8	CO1	COI-3	String Methods and Comparisons (== vs equals())	Textbook, Chapter 18, Page 494-519	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
9	CO1	COI-2	Legacy Date Classes (Date, Calendar) vs Modern Time API	Textbook, Chapter 31,	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1

Sess.No.	CO	COI	Topic	Book No[CH No][Page No]	Teaching-Learning Methods	EvaluationComponents
				Page 1065-1066		
10	CO1	COI-3	Control Structures: if, switch, loops; Arrays (1D and 2D)	Textbook, Chapter 5, Page 97-117	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
11	CO2	COI-2	Classes and Objects, Constructors, this keyword	Textbook, Chapter 6, Page 119-135	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1,Skill In-Sem Exam
12	CO2	COI-3	Constructor Chaining, Constructors (default, user-defined, parameterized)	Textbook, Chapter 6, Page 119-135	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
13	CO2	COI-2	static Keyword, Static vs Instance Context	Textbook, Chapter 7, Page 139-155	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
14	CO2	COI-2	final Keyword, Constants, Method and Class finality	Textbook, Chapter 7, Page 139-155	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
15	CO2	COI-3	Encapsulation, Packages, Access Modifiers	Textbook, Chapter 9, Page 204-205	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
16	CO2	COI-3	Inheritance: Single, Multilevel, Multiple	Textbook, Chapter 8, Page 173-186	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
17	CO2	COI-3	Method Overriding, super Keyword	Textbook, Chapter 8, Page 179-192	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
18	CO2	COI-3	Aggregation vs Composition	Textbook, Chapter 1, Page 190-192	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
19	CO2	COI-3	Abstract Classes vs Interfaces	Textbook, Chapter 8, Page 193 - 227	Chalk,LTC,Talk	ALM,End Semester Exam,SEM-EXAM1
20	CO2	COI-3	Dynamic Binding and Polymorphism	Textbook, Chapter 1, Page 190-192	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM1
21	CO3	COI-2	Exception Handling Basics: try, catch, finally	Textbook, Chapter 10, Page 229-240	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2,Skill In-Sem Exam
22	CO3	COI-	Exception Hierarchy: Checked	Textbook,	Chalk,LTC,Talk	End Semester

Sess.No.	CO	COI	Topic	Book No[CH No][Page No]	Teaching-Learning Methods	EvaluationComponents
		3	vs Unchecked, throw and throws	Chapter 10, Page 239-243		Exam,SEM-EXAM2
23	CO3	COI-3	Custom Exception Creation and Usage	Textbook, Chapter 10, Page 239-243	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2
24	CO3	COI-3	Collections: ArrayList, LinkedList	Textbook, Chapter 20, Page 588, Page 654	Chalk,LTC,Talk	ALM,End Semester Exam,SEM-EXAM2
25	CO3	COI-3	Collections: HashSet, HashMap	Textbook, Chapter 20, Page 601-603	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2
26	CO3	COI-3	Queue Interfaces and Usage	Textbook, Chapter 20, Page 601-603	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2
27	CO3	COI-3	Generics: Class/Method, Bounded Types	Textbook, Chapter 14, Page 352-360	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2
28	CO3	COI-3	Comparator and Comparable, Custom Sorting	Textbook, Chapter 15, Page 397-422	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2
29	CO3	COI-3	Lambda Expressions and Functional Interfaces	Textbook, Chapter 15, Page 395-401	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2
30	CO3	COI-3	Java Stream API: map, filter, reduce, collect, groupBy, partitioning	Textbook, Chapter 30, Page 1019-1044	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2
31	CO4	COI-3	Introduction to Threads: Thread class, Runnable Interface	Textbook, Chapter 11, Page 252-258	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2
32	CO4	COI-3	Thread Lifecycle, Context Switching, start(), run()	Textbook, Chapter 11, Page 260, Page 262	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2
33	CO4	COI-3	sleep(), join(), yield(), Thread States	Textbook, Chapter 11, Page 260, Page 262	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2,Skill In-Sem Exam
34	CO4	COI-3	Concurrent vs Parallel Execution, Synchronization	Textbook, Chapter 11, Page 263-266	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2

Sess.No.	CO	COI	Topic	Book No[CH No][Page No]	Teaching-Learning Methods	EvaluationComponents
35	CO4	COI-3	Reentrant Locks, Blocking Queues	Textbook, Chapter 11, Page 263-266	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2
36	CO4	COI-3	Deadlock: Causes, Detection and Avoidance	Textbook, Chapter 11, Page 279	Chalk,LTC,Talk	ALM,End Semester Exam,SEM-EXAM2
37	CO4	COI-3	File I/O Basics: Byte and Character Streams	Textbook, Chapter 22, Page 737-756	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2
38	CO4	COI-3	Buffered Streams, Reading/Writing Files	Textbook, Chapter 22, Page 756-765	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2
39	CO4	COI-3	Object Serialization and Deserialization	Textbook, Chapter 22, Page 756-765	Chalk,LTC,Talk	End Semester Exam,SEM-EXAM2

Lecture Session wise Teaching – Learning Plan

SESSION NUMBER : 1

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
30	Course Handout, Introduction to Java, JDK, JRE, JVM, and first Java program	2	Talk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 2

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	JVM, JRE, JDK, Compilation and Execution Process	2	Chalk	--- NOT APPLICABLE ---

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 3

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Data Types, Type Conversion and Casting	2	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 4

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Wrapper Classes, Autoboxing and Unboxing	2	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 5

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
40	Operators and Expressions	2	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 6

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Method Declaration, Syntax, Parameters, Return types	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 7

Session Outcome: 1 Student must understand String Handling – String, StringBuilder, StringBuffer, Immutability and able to work with complex problems.

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	String Handling – String, StringBuilder, StringBuffer, Immutability	3	Chalk	Think / Pair / Share
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 8

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	String Methods and Comparisons (== vs equals())	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 9

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
30	Legacy Date Classes (Date, Calendar) vs Modern Time API	2	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 10

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Control Structures: if, switch, loops; Arrays (1D and 2D)	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 11

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Classes and Objects – Structure and Usage	2	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 12

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Constructor Chaining, Constructors (default, user-defined, parameterized)	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 13

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	static Keyword, Static vs Instance Context	2	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 14

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	final Keyword, Constants, Method and Class finality	2	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 15

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Encapsulation, Packages, Access Modifiers	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 16

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Inheritance: Single, Multilevel, Multiple	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 17

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Method Overriding, super Keyword	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 18

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Aggregation vs Composition	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 19

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Abstract Classes vs Interfaces	3	Talk	Debate
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 20

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Dynamic Binding and Polymorphism	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 21

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	2	Talk	--- NOT APPLICABLE ---
30	Exception Handling – try-catch-finally, throw, throws	2	Talk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 22

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Exception Hierarchy: Checked vs Unchecked, throw and throws	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 23

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods

10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Custom Exception Creation and Usage	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 24

Session Outcome: 1 Students must able to understand and apply the concept of Collections: ArrayList, LinkedList to solve real world problems.

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Collections: ArrayList, LinkedList	3	Chalk	Case Study
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 25

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Collections: HashSet, HashMap	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 26

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Queue Interfaces and Usage	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE

SESSION NUMBER : 27

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Generics: Class/Method, Bounded Types	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 28

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Comparator and Comparable, Custom Sorting	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 29

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Lambda Expressions and Functional Interfaces	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 30

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning	Active Learning

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Java Stream API: map, filter, reduce, collect, groupBy, partitioning	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 31

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Introduction to Threads: Thread class, Runnable Interface	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 32

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Thread Lifecycle, Context Switching, start(), run()	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 33

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	sleep(), join(), yield(), Thread States	3	Chalk	--- NOT APPLICABLE ---

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 34

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Concurrent vs Parallel Execution, Synchronization	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 35

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Reentrant Locks, Blocking Queues	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 36

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Deadlock: Causes, Detection and Avoidance	3	Chalk	Problem-Based Learning
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 37

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	File I/O Basics: Byte and Character Streams	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 38

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Buffered Streams, Reading/Writing Files	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 39

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Recap	1	Talk	--- NOT APPLICABLE ---
30	Object Serialization and Deserialization	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

Tutorial Course DELIVERY Plan: NO Delivery Plan Exists

Tutorial Session wise Teaching – Learning Plan

No Session Plans Exists

Practical Course DELIVERY Plan:

Tutorial Session no	Topics	CO-Mapping
1	Data Types, Type Conversion, Operators, Control Structures and Arrays	CO5
2	String Handling and Date-Time API	CO5
3	Classes, Objects, Constructors, and the this Keyword	CO5
4	Encapsulation and Access Modifiers	CO5
5	Inheritance, Method Overriding, and super Keyword	CO5
6	Abstract Classes, Interfaces, and Polymorphism	CO5
7	Exception Handling and Custom Exceptions	CO5
8	Collections and Generics	CO5
9	Comparator, Comparable, and Custom Sorting	CO5
10	Lambda Expressions and Stream API	CO5
11	Multithreading with Thread Class and Runnable	CO5
12	Synchronization, ReentrantLock, and Deadlock Handling	CO5
13	File I/O and Object Serialization	CO5

Practical Session wise Teaching – Learning Plan

SESSION NUMBER : 1

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Data Types, Type Conversion, Operators, and Control Structures	3	Talk	--- NOT APPLICABLE ---
40	Data Types, Type Conversion, Operators, and Control Structures	3	Talk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 2

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	String Handling	3	Chalk	--- NOT APPLICABLE ---
40	Date-Time API	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 3

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Classes and Objects	3	Chalk	--- NOT APPLICABLE ---
40	Constructors and the this Keyword	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 4

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Encapsulation and Access Modifiers	3	Chalk	--- NOT APPLICABLE ---
40	Encapsulation and Access Modifiers	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 5

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Inheritance, Method Overriding	3	Chalk	--- NOT APPLICABLE ---
40	Method Overriding and super Keyword	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 6

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Abstract Classes and Interfaces	3	Chalk	--- NOT APPLICABLE ---
40	Interfaces and Polymorphism	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 7

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Exception Handling	3	Chalk	--- NOT APPLICABLE ---
40	Custom Exceptions	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 8

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Collections	3	Chalk	--- NOT APPLICABLE ---
40	Generics	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 9

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Comparator and Custom Sorting	3	Chalk	--- NOT APPLICABLE ---
40	Comparable and Custom Sorting	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 10

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Lambda Expressions	3	Chalk	--- NOT APPLICABLE ---
40	Stream API	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE

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SESSION NUMBER : 11

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Multithreading with Thread Class	3	Chalk	--- NOT APPLICABLE ---
40	Multithreading with Runnable	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 12

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Synchronization and ReentrantLock	3	Chalk	--- NOT APPLICABLE ---
40	Deadlock Handling	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 13

No Session Outcomes are mapped

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	File I/O	3	Chalk	--- NOT APPLICABLE ---
40	Object Serialization	3	Chalk	--- NOT APPLICABLE ---

10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

Skilling Course DELIVERY Plan:

Skilling session no	Topics/Experiments	CO-Mapping
1	Type Conversion and Casting with Wrapper Classes	CO1
2	String Manipulation and Immutability	CO1
3	Control Flow using Conditional and Looping Statements	CO1
4	Date and Time API (java.time)	CO1
5	Array Operations (1D & 2D)	CO1
6	Class Design with Encapsulation and Constructors	CO2
7	Inheritance and Method Overring	CO2
8	Abstract Classes Vs Interfaces	CO2
9	Aggregation Vs Composition	CO2
10	Custom Exception Handling	CO3
11	Collections with Sorting	CO3
12	Java Stream API - map,filter, reduce	CO3
13	Thread creation and Synchronization	CO4

Skilling Session wise Teaching – Learning Plan

SESSION NUMBER : 1

Session Outcome: 1 Students should be able to apply the Type Conversion and Casting with Wrapper Classes concepts for their understanding

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Type Conversion and Casting with Wrapper Classes	3	Chalk	--- NOT APPLICABLE ---
40	Type Conversion and Casting with Wrapper Classes	3	Chalk	--- NOT APPLICABLE ---

| 10 | Conclusion and Summary | 2 | Talk | --- NOT APPLICABLE --- |

SESSION NUMBER : 2

Session Outcome: 1 Students must understand String Manipulation and Immutability and must apply to solve various complex problems

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	String Manipulation and Immutability	3	Chalk	--- NOT APPLICABLE ---
40	String Manipulation and Immutability	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 3

Session Outcome: 1 Students must understand Control Flow using Conditional and Looping Statements and use them to solve various problems.

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Control Flow using Conditional and Looping Statements	3	Chalk	--- NOT APPLICABLE ---
40	Control Flow using Conditional and Looping Statements	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 4

Session Outcome: 1 Students must learn how to apply Date and Time API (java.time) concepts when solving localised implementations

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---

40	Date and Time API (java.time)	3	Chalk	--- NOT APPLICABLE ---
40	Date and Time API (java.time)	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 5

Session Outcome: 1 Student must work with Array Operations (1D & 2D) to perform data storage and implementation.

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Array Operations (1D & 2D)	3	Chalk	--- NOT APPLICABLE ---
40	Array Operations (1D & 2D)	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 6

Session Outcome: 1 Students should be able to develop a class structure with Encapsulation and Constructors.

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Class Design with Encapsulation and Constructors	3	Chalk	--- NOT APPLICABLE ---
40	Class Design with Encapsulation and Constructors	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 7

Session Outcome: 1 Students must understand how inheritance works and be able to apply to solve real world problems.

Time(min)	Topic	BTL	Teaching-Learning	Active Learning

			Methods	Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Inheritance, Method Overriding	3	Chalk	--- NOT APPLICABLE ---
40	Inheritance and Method Overriding	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 8

Session Outcome: 1 Students must work Abstract Classes vs Interfaces to understand their importance in solving real world scenarios

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Abstract Classes vs Interfaces	3	Chalk	--- NOT APPLICABLE ---
40	Abstract Classes vs Interfaces	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 9

Session Outcome: 1 Students should know the limitation of Inheritance and should work with Aggregation vs Composition to solve various usecases to reduce hierarchial complexities.

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Aggregation vs Composition	3	Chalk	--- NOT APPLICABLE ---
40	Aggregation vs Composition	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 10

Session Outcome: 1 students should understand and work with Exceptional handling concepts to handles Exception in java efficiently

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Custom Exception Handling	3	Chalk	--- NOT APPLICABLE ---
40	Custom Exception Handling	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 11

Session Outcome: 1 Students must implement Collections with Sorting (Comparator vs Comparable) to perform complex sorting operation over a Collection data.

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Collections with Sorting (Comparator vs Comparable)	3	Chalk	--- NOT APPLICABLE ---
40	Collections with Sorting (Comparator vs Comparable)	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

SESSION NUMBER : 12

Session Outcome: 1 students must work with steam api methods to perform efficient operation on Collection classes data

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Java Stream API: map, filter, reduce, collect, groupBy, partitioning	3	Chalk	--- NOT APPLICABLE ---
40	Java Stream API - map, filter, reduce	3	Chalk	--- NOT APPLICABLE ---

| 10 | Conclusion and Summary | 2 | Talk | --- NOT APPLICABLE --- |

SESSION NUMBER : 13

Session Outcome: 1 students should be able to implement a java multithreading application for better application development

Time(min)	Topic	BTL	Teaching-Learning Methods	Active Learning Methods
10	Attendance & Introduction	1	Talk	--- NOT APPLICABLE ---
40	Thread Creation and Synchronization	3	Chalk	--- NOT APPLICABLE ---
40	Thread Creation and Synchronization	3	Chalk	--- NOT APPLICABLE ---
10	Conclusion and Summary	2	Talk	--- NOT APPLICABLE ---

WEEKLY HOMEWORK ASSIGNMENTS/ PROBLEM SETS/OPEN ENDEDED PROBLEM-SOLVING EXERCISES etc:

Week	Assignment Type	Assignment No	Topic	Details	co

COURSE TIME TABLE:

	Hour	1	2	3	4	5	6	7	8	9
Day	Component									
Mon	Theory	- - -	- - -	- - -	- - -	---	---	V-S101,V-S102,V-S103,V-S104,V-S105,V-S106,V-S107,V-S108,V-S109,V-S110,V-S111,V-S112,V-S113,V-S114,V-S115,V-S116,V-S117,V-S118,V-S119,V-S120,V-S121,V-S122,V-S123,V-S124,V-S125	- - -	- - -
	Tutorial	- - -	- - -	- - -	- - -	---	---	--	- - -	- - -
	Lab	- - -	- - -	- - -	- - -	---	---	--	- - -	- - -
	Skilling	- - -	- - -	- - -	- - -	---	---	--	- - -	- - -
Tue	Theory	- - -	- - -	- - -	- - -	---	---	---	- - -	- - -

Day											
	Tutorial	- - -	-	-	-	-	---	---	---	-	-
	Lab	- - -	-	-	-	-	---	---	---	-	-
	Skilling	- - -	-	-	-	-	---	---	---	-	-
Wed	Theory	- - -	-	-	-	-	---	---	V-S201,V-S202,V-S203,V-S204,V-S205,V-S206,V-S207,V-S208,V-S209,V-S210,V-S211,V-S212,V-S213,V-S214,V-S215,V-S216,V-S217,V-S218,V-S219,V-S220,V-S221,V-S222,V-S223,V-S224,V-S225,V-S226	- - -	-
	Tutorial	- - -	-	-	-	-	---	---	--	- - -	-
	Lab	- - -	-	-	-	-	---	---	--	- - -	-
	Skilling	- - -	-	-	-	-	---	---	--	- - -	-
Thu	Theory	- - -	-	-	-	-	V-S115,V-S116,V-S117,V-S118,V-S119,V-S120,V-S121,V-S125	V-S115,V-S116,V-S117,V-S118,V-S119,V-S120,V-S121,V-S125	---	- - -	-
	Tutorial	- - -	-	-	-	-	--	--	---	- - -	-
	Lab	- - -	-	-	-	-	V-S101,V-S101,V-S101,V-S102,V-S102,V-S102,V-S103,V-S103,V-S103,V-S104,V-S104,V-S104,V-S105,V-S105,V-S105,V-S106,V-S106,V-S106,V-S107,V-S107,V-S107,V-S122,V-S122,V-S122,V-S123,V-S123,V-S123	V-S101,V-S101,V-S101,V-S102,V-S102,V-S102,V-S103,V-S103,V-S103,V-S104,V-S104,V-S104,V-S105,V-S105,V-S105,V-S106,V-S106,V-S106,V-S107,V-S107,V-S107,V-S122,V-S122,V-S122,V-S123,V-S123,V-S123	---	- - -	-
	Skilling	- - -	-	-	-	-	V-S108,V-S108,V-S109,V-S109,V-S110,V-S110,V-S111,V-S111,V-S112,V-S112,V-S113,V-S113,V-S114,V-S114,V-S124,V-S124	V-S108,V-S108,V-S109,V-S109,V-S110,V-S110,V-S111,V-S111,V-S112,V-S112,V-S113,V-S113,V-S114,V-S114,V-S124,V-S124	---	- - -	-
Fri	Theory	- - -	-	-	-	-	V-S215,V-S216,V-S218,V-S219,V-S220,V-S221,V-S225,V-S226	V-S215,V-S216,V-S218,V-S219,V-S220,V-S221,V-S225,V-S226	---	- - -	-
	Tutorial	- - -	-	-	-	-	--	--	---	- - -	-
	Lab	- - -	-	-	-	-	V-S201,V-S201,V-S201,V-S202,V-S202,V-	V-S201,V-S201,V-S201,V-S202,V-S202,V-	---	- -	-

		-	-	-	-	S202,V-S203,V-S203,V-S203,V-S204,V-S204,V-S204,V-S205,V-S205,V-S205,V-S206,V-S206,V-S206,V-S207,V-S207,V-S207,V-S222,V-S222,V-S222,V-S223,V-S223,V-S223	S202,V-S203,V-S203,V-S203,V-S204,V-S204,V-S204,V-S205,V-S205,V-S205,V-S206,V-S206,V-S206,V-S207,V-S207,V-S207,V-S222,V-S222,V-S222,V-S223,V-S223,V-S223		-	-
	Skilling	- - -	- - -	- - -	- - -	V-S208,V-S208,V-S209,V-S209,V-S210,V-S210,V-S211,V-S211,V-S212,V-S212,V-S213,V-S213,V-S214,V-S214,V-S217,V-S217,V-S224,V-S224	V-S208,V-S208,V-S209,V-S209,V-S210,V-S210,V-S211,V-S211,V-S212,V-S212,V-S213,V-S213,V-S214,V-S214,V-S217,V-S217,V-S224,V-S224	---	- - -	- - -
Sat	Theory	- -	- -	- -	- -	--	--	--	- -	- -
	Tutorial	- -	- -	- -	- -	--	--	--	- -	- -
	Lab	- -	- -	- -	- -	--	--	--	- -	- -
	Skilling	- -	- -	- -	- -	--	--	--	- -	- -
Sun	Theory	- -	- -	- -	- -	--	--	--	- -	- -
	Tutorial	- -	- -	- -	- -	--	--	--	- -	- -
	Lab	- -	- -	- -	- -	--	--	--	- -	- -
	Skilling	- -	- -	- -	- -	--	--	--	- -	- -

REMEDIAL CLASSES:

Supplement course handout, which may perhaps include special lectures and discussions that would be planned, and schedule notified according

SELF-LEARNING:

Assignments to promote self-learning, survey of contents from multiple sources.

S.no	Topics	CO	ALM	References/MOOCS

DELIVERY DETAILS OF CONTENT BEYOND SYLLABUS:

Content beyond syllabus covered (if any) should be delivered to all students that would be planned, and schedule notified accordingly.

S.no	Advanced Topics, Additional Reading, Research papers and any	CO	ALM	References/MOOCS

EVALUATION PLAN:

Evaluation Type	Evaluation Component	Weightage/Marks	Assessment Dates	Duration (Hours)	CO1	CO2	CO3	CO4	CO5	CO6

End Semester Summative Evaluation Total= 40 %	**Skill Sem-End Exam**	Weightage	8		100	2	2	2	2		
		Max Marks	50			12.5	12.5	12.5	12.5		
	Lab End Semester Exam	Weightage	8		100					8	
		Max Marks	50							50	
	End Semester Exam	Weightage	24		180	6	6	6	6		
		Max Marks	100			25	25	25	25		
In Semester Formative Evaluation Total= 24 %	**Skilling Continuous Evaluation**	Weightage	8		90	2	2	2	2		
		Max Marks	50			12.5	12.5	12.5	12.5		
	Continuous Evaluation - Lab Exercise	Weightage	8		90					8	
		Max Marks	50							50	
	ALM	Weightage	8		90	2	2	2	2		
		Max Marks	50			12.5	12.5	12.5	12.5		
In Semester Summative Evaluation Total= 36 %	**Skill In-Sem Exam**	Weightage	6		90	1.5	1.5	1.5	1.5		
		Max Marks	50			12.5	12.5	12.5	12.5		
	Lab In Semester Exam	Weightage	6		90					6	
		Max Marks	50							50	
	Semester in Exam-II	Weightage	12		90			6	6		
		Max Marks	50					25	25		
	Semester in Exam-I	Weightage	12		90	6	6				
		Max Marks	50			25	25				

ATTENDANCE POLICY:

Every student is expected to be responsible for regularity of his/her attendance in class rooms and laboratories, to appear in scheduled tests and examinations and fulfill all other tasks assigned to him/her in every course

In every course, student has to maintain a minimum of 85% attendance to be eligible for appearing in Semester end examination of the course, for cases of medical issues and other unavoidable circumstances the students will be condoned if their attendance is between 75% to 85% in every course, subjected to submission of medical certificates, medical case file and other needful documental proof to the concerned departments

DETENTION POLICY :

In any course, a student has to maintain a minimum of 85% attendance and In-Semester Examinations to be eligible for appearing to the Semester End Examination, failing to fulfill these conditions will deem such student to have been detained in that course.

PLAGIARISM POLICY :

Supplement course handout, which may perhaps include special lectures and discussions

COURSE TEAM MEMBERS, CHAMBER CONSULTATION HOURS AND CHAMBER VENUE DETAILS:

Supplement course handout, which may perhaps include special lectures and discussions

Name of Faculty	Delivery Component of Faculty	Sections of Faculty	Chamber Consultation Day (s)	Chamber Consultation Timings for each day	Chamber Consultation Room No:	Signature of Course faculty:
Nagamalleswari Dubba	P	118-B	-	-	-	-
Seetharama Prasad Mylavarapu	P	203-B,209-B	-	-	-	-
Seetharama Prasad Mylavarapu	S	125-B	-	-	-	-

Satya Gouri Arunasri Pabbisetti	L	112-MA	-	-	-	-
Satya Gouri Arunasri Pabbisetti	P	112-A	-	-	-	-
Satya Gouri Arunasri Pabbisetti	S	112-A	-	-	-	-
Venkata Naga Ramesh Janjhyam	P	103-C,205-B	-	-	-	-
Venkata Naga Ramesh Janjhyam	S	204-B	-	-	-	-
Kameswara Rao Manchiraju	L	110-MA	-	-	-	-
Kameswara Rao Manchiraju	P	110-A	-	-	-	-
Kameswara Rao Manchiraju	S	110-A	-	-	-	-
Ravi Tata	P	123-C	-	-	-	-
Vasantham Kumar	L	117-MA	-	-	-	-
Vasantham Kumar	P	117-A	-	-	-	-
Vasantham Kumar	S	117-A,224-A	-	-	-	-
Rajya Lakshmi Kottapalli	P	207-B	-	-	-	-
KRISHNA CHAITANYA GOGINENI	L	118-MA	-	-	-	-
KRISHNA CHAITANYA GOGINENI	P	118-A	-	-	-	-
KRISHNA CHAITANYA GOGINENI	S	118-A	-	-	-	-
Lakshmana Maguluri	S	210-B,225-B	-	-	-	-
Hari Vege	L	102-MA,211-MA	-	-	-	-
Surya Kiran Jonnalagadda	P	117-C	-	-	-	-
Venu Babu Rachapudi	P	121-C	-	-	-	-
Raju Anitha	S	211-B,226-B	-	-	-	-
Anjali Devi Swarna	S	121-B,122-B,203-B	-	-	-	-
Radha Mothukuri	P	106-C,204-B	-	-	-	-
Radha Mothukuri	S	120-B	-	-	-	-
Ravi Teja Kanakala	P	226-B	-	-	-	-
Venkata Daya Sagar Ketaraju	S	201-B	-	-	-	-
Vidya Ponnam	L	201-MA	-	-	-	-
Vidya Ponnam	P	118-C,201-A	-	-	-	-
Vidya Ponnam	S	201-A	-	-	-	-
Vithya Ganesan	P	218-C	-	-	-	-
Tirandasu Kumar	P	108-B,115-C,203-C	-	-	-	-
Tirandasu Kumar	S	108-B	-	-	-	-
Smritilekha Das	P	214-C	-	-	-	-
Ratna Kanth Nelapati	P	201-B	-	-	-	-
Rama Garigipati	P	119-B	-	-	-	-
Rama Garigipati	S	119-B	-	-	-	-

Umamaheswararao Batta	P	222-B	-	-	-	-
Suresh Doddi	L	124-MA	-	-	-	-
Suresh Doddi	P	124-A,206-B	-	-	-	-
Suresh Doddi	S	124-A,206-B	-	-	-	-
Anjana Akurathi	L	224-MA	-	-	-	-
Anjana Akurathi	P	224-A	-	-	-	-
Venkata Suresh Bhavanam	L	123-MA	-	-	-	-
Venkata Suresh Bhavanam	P	123-A,211-B	-	-	-	-
Venkata Suresh Bhavanam	S	123-A	-	-	-	-
Palthiya Rao	L	116-MA,202-MA	-	-	-	-
Palthiya Rao	P	116-A,202-A	-	-	-	-
Palthiya Rao	S	116-A,202-A	-	-	-	-
Ranjith Rupani	L	111-MA	-	-	-	-
Ranjith Rupani	P	111-A,218-B,223-B,224-C	-	-	-	-
Ranjith Rupani	S	111-A	-	-	-	-
Tushar DE	S	205-B,224-B	-	-	-	-
Supriya Pacha	S	209-B	-	-	-	-
Deepa Amuth	S	214-B	-	-	-	-
N B Arunekumar Balasubramanian	P	217-B	-	-	-	-
Gunti Surendra	S	213-B	-	-	-	-
Bejjam Benarji	P	107-B	-	-	-	-
Vijaya Kumar Radha	L	108-MA	-	-	-	-
Vijaya Kumar Radha	P	108-A,208-C	-	-	-	-
Vijaya Kumar Radha	S	108-A	-	-	-	-
Tulasi Rajesh	L	122-MA,213-MA	-	-	-	-
Tulasi Rajesh	P	122-A,213-A	-	-	-	-
Tulasi Rajesh	S	122-A,213-A	-	-	-	-
Vuyyuru Reddy	P	108-C,116-C,206-C	-	-	-	-
Vuyyuru Reddy	S	111-B	-	-	-	-
Sreekanth Kavuri	L	115-MA,203-MA	-	-	-	-
Sreekanth Kavuri	P	115-A,203-A	-	-	-	-

Sreekanth Kavuri	S	115-A,203-A	-	-	-	-
Adapa Gopi	P	122-C	-	-	-	-
Dayanidhi Mohapatra	S	109-B	-	-	-	-
Thamodharan Arumugam	P	111-C	-	-	-	-
Koppuravuri Gupta	P	225-B	-	-	-	-
Sreenivasulu Bolla	P	219-B	-	-	-	-
Prasanthi Valluri	P	216-B	-	-	-	-
Dyuti Banerjee	P	201-C	-	-	-	-
Swetha Pendem	P	123-B,216-C	-	-	-	-
nuthakki praveena	P	110-B,208-B	-	-	-	-
nuthakki praveena	S	110-B	-	-	-	-
B V N Prasad Paruchuri	P	220-C	-	-	-	-
DINESH PANCHARIA	P	120-C	-	-	-	-
RAJENDRA GANIYA	P	114-B	-	-	-	-
RAJENDRA GANIYA	S	114-B	-	-	-	-
KUCHIPUDI PRASANTH KUMAR	L	205-MA	-	-	-	-
KUCHIPUDI PRASANTH KUMAR	S	205-A	-	-	-	-
SETTI RAJESWARI	L	206-MA	-	-	-	-
SETTI RAJESWARI	P	206-A	-	-	-	-
SETTI RAJESWARI	S	206-A	-	-	-	-
SWARNA MAHESH NAIDU	S	115-B	-	-	-	-
PUNYALA RAMADEVI	L	204-MA	-	-	-	-
PUNYALA RAMADEVI	P	204-A	-	-	-	-
PUNYALA RAMADEVI	S	107-B,204-A	-	-	-	-
YENGALA AMARAIAH	S	222-B	-	-	-	-
SYED AZMAL	L	104-MA,225-MA	-	-	-	-
SYED AZMAL	P	104-A	-	-	-	-
SYED AZMAL	S	104-A,225-A	-	-	-	-
annamaraju thanuja	P	125-C	-	-	-	-
annamaraju thanuja	S	207-B	-	-	-	-
YELISETTY MADHAVILATHA	S	223-B	-	-	-	-
KAVITHA SARIHADDU	P	210-B,215-C	-	-	-	-
KAVITHA SARIHADDU	S	112-B,123-B	-	-	-	-
Thella Priyanka	P	225-C	-	-	-	-
ALUR PRANEETHA	P	113-B	-	-	-	-
ALUR PRANEETHA	S	113-B	-	-	-	-
ANUMULA SRUTHI	P	102-C	-	-	-	-
ANUMULA SRUTHI	S	116-B,220-B	-	-	-	-

KISHORE DASARI	P	115-B,124-C	-	-	-	-
KISHORE DASARI	S	124-B	-	-	-	-
LAVANYA KONGALA	P	122-B,212-C	-	-	-	-
LAVANYA KONGALA	S	101-B	-	-	-	-
Bakeeru Sowjanya	P	113-C,211-A	-	-	-	-
Bakeeru Sowjanya	S	211-A	-	-	-	-
surya chebrolu	P	101-C,117-B	-	-	-	-
BALAKRISHNA BANGARU	S	118-B	-	-	-	-
PINAPATI RAO	P	210-C	-	-	-	-
BALASUBRAMANI S	P	105-C,124-B	-	-	-	-
RAMAKRISHNA REGULAGADDA	P	211-C,223-C	-	-	-	-
LAKSHMI UPPULURI	P	102-B,109-C	-	-	-	-
V Rao	P	213-C,217-C	-	-	-	-
DRAKSHAYANI SRIRAMSETTI	P	209-C	-	-	-	-
DRAKSHAYANI SRIRAMSETTI	S	105-B	-	-	-	-
BANDI RANI	P	104-B	-	-	-	-
ANUSHA GUDISE	P	110-C	-	-	-	-
Mohsin Khanday	P	202-C	-	-	-	-
D Pramodh Krishna	P	103-B	-	-	-	-
Mounika Addanki	L	119-MA	-	-	-	-
Mounika Addanki	P	119-A,207-C	-	-	-	-
Mounika Addanki	S	119-A,202-B	-	-	-	-
Selvamuthukumar T	P	219-C	-	-	-	-
Jhansi Rani Challapalli	L	107-MA,212-MA	-	-	-	-
Jhansi Rani Challapalli	P	107-A,212-A	-	-	-	-
Jhansi Rani Challapalli	S	107-A,212-A	-	-	-	-
BANDLA NIROSHA	S	102-B	-	-	-	-
Sathviki Rompicherla	P	106-B	-	-	-	-
Venkata Kalavala	P	104-C,125-B,205-C	-	-	-	-
PANGULURI PADMAVATHI	L	103-MA	-	-	-	-
PANGULURI PADMAVATHI	P	103-A	-	-	-	-
PANGULURI PADMAVATHI	S	103-A,208-B	-	-	-	-
YELISELA RAJESH	L	109-MA	-	-	-	-
YELISELA RAJESH	P	109-A	-	-	-	-
YELISELA RAJESH	S	109-A	-	-	-	-

Badde Prakash	P	205-A	-	-	-	-
Vamsi Mekathoti	P	224-B	-	-	-	-
BILLA RAO	P	107-C	-	-	-	-
BATHULA jonathan	L	209-MA	-	-	-	-
BATHULA jonathan	P	121-B,209-A	-	-	-	-
BATHULA jonathan	S	209-A	-	-	-	-
PRABAKARAN PERUMAL	L	120-MA	-	-	-	-
PRABAKARAN PERUMAL	P	120-A	-	-	-	-
PRABAKARAN PERUMAL	S	120-A,218-B	-	-	-	-
bobba sahithi	P	202-B,225-A	-	-	-	-
bobba sahithi	S	104-B	-	-	-	-
MUPPIDI RAO	L	105-MA	-	-	-	-
MUPPIDI RAO	P	105-A	-	-	-	-
MUPPIDI RAO	S	105-A,212-B,216-B	-	-	-	-
KRISHNA THOTA	P	222-C,226-C	-	-	-	-
Sujan Vadde	L	214-MA	-	-	-	-
Sujan Vadde	P	214-A	-	-	-	-
Sujan Vadde	S	214-A	-	-	-	-
Boyina Kavya	L	210-MA	-	-	-	-
Boyina Kavya	P	102-A,210-A	-	-	-	-
Boyina Kavya	S	102-A,210-A	-	-	-	-
VUNNAM LATHA	L	106-MA,223-MA	-	-	-	-
VUNNAM LATHA	P	106-A,223-A	-	-	-	-
VUNNAM LATHA	S	106-A,223-A	-	-	-	-
Kunchanapalli Krishna	P	213-B	-	-	-	-
ARUN PENUMUKKALA	P	221-C	-	-	-	-
Tagore Gundlapalli	P	204-C	-	-	-	-
Tagore Gundlapalli	S	219-B	-	-	-	-
Tarak Hussain	P	112-B	-	-	-	-
NIMMAGADDA MURALIKRISHNA	S	221-B	-	-	-	-
K.ANU RADHA	P	212-B	-	-	-	-
SHAIK BASHA	P	114-C	-	-	-	-
V SIVARAMARAJU VETUKURI	S	215-B	-	-	-	-
Sathyavani Addanki	P	109-B,214-B	-	-	-	-
Sathyavani Addanki	S	217-B	-	-	-	-
Sampathirao Suneetha	L	113-MA	-	-	-	-
Sampathirao Suneetha	P	113-A	-	-	-	-

Sampathirao Suneetha	S	113-A	-	-	-	-
shiyam v	L	215-MA	-	-	-	-
shiyam v	P	215-A	-	-	-	-
shiyam v	S	215-A	-	-	-	-
Maheswari Bandi	L	207-MA	-	-	-	-
Maheswari Bandi	P	207-A	-	-	-	-
Maheswari Bandi	S	106-B,207-A	-	-	-	-
SRILAKSHMI SAKAMUDI	P	216-A	-	-	-	-
Balaji Velchuri	L	217-MA	-	-	-	-
Balaji Velchuri	P	217-A	-	-	-	-
Balaji Velchuri	S	217-A	-	-	-	-
KOTTURU PRASUNA	S	103-B	-	-	-	-
Geetha M	L	222-MA	-	-	-	-
Geetha M	P	222-A	-	-	-	-
Geetha M	S	222-A	-	-	-	-
JALLI BABU	P	215-B	-	-	-	-
CHERUKUPALLI PRABHAVATHI	L	218-MA	-	-	-	-
CHERUKUPALLI PRABHAVATHI	P	218-A	-	-	-	-
CHERUKUPALLI PRABHAVATHI	S	218-A	-	-	-	-
YADAVALLI SAROJA	P	112-C,116-B,220-B	-	-	-	-
TALASILA TARAKA RAJESWAR RAO	L	220-MA	-	-	-	-
TALASILA TARAKA RAJESWAR RAO	P	220-A	-	-	-	-
TALASILA TARAKA RAJESWAR RAO	S	220-A	-	-	-	-
susmitha uddaraju	P	120-B	-	-	-	-
VENKATASAICHANDRAKANTH P	L	121-MA,221-MA	-	-	-	-
VENKATASAICHANDRAKANTH P	P	121-A,221-A	-	-	-	-
VENKATASAICHANDRAKANTH P	S	121-A,221-A	-	-	-	-
Sanjay Kumar	S	117-B	-	-	-	-
Ramadevi chappala	L	125-MA,208-MA	-	-	-	-
Ramadevi chappala	P	125-A,208-A	-	-	-	-
Ramadevi chappala	S	125-A,208-A	-	-	-	-
Abhigna Jalli	P	119-C	-	-	-	-
SUDHAKAR ATCHALA	L	101-MA	-	-	-	-
SUDHAKAR ATCHALA	P	101-A	-	-	-	-
SUDHAKAR ATCHALA	S	101-A	-	-	-	-
AMRUTAVALLI AKULA	L	226-MA	-	-	-	-
AMRUTAVALLI AKULA	P	226-A	-	-	-	-

AMRUTAVALLI AKULA	S	226-A	-	-	-	-
Vijay R	L	114-MA	-	-	-	-
Vijay R	P	114-A	-	-	-	-
Vijay R	S	114-A	-	-	-	-
POONURU REDDY	L	216-MA	-	-	-	-
POONURU REDDY	S	216-A	-	-	-	-
Gurudatta Verma	P	101-B,221-B	-	-	-	-
RAYNUKAAZHAKARSAMY ,	L	219-MA	-	-	-	-
RAYNUKAAZHAKARSAMY ,	P	105-B,219-A	-	-	-	-
RAYNUKAAZHAKARSAMY ,	S	219-A	-	-	-	-
VIJAYA GOPAL NALLAGORLA	P	111-B	-	-	-	-

GENERAL INSTRUCTIONS

Students should come prepared for classes and carry the text book(s) or material(s) as prescribed by the Course Faculty to the class.

NOTICES

Most of the notices are available on the LMS platform.

All notices will be communicated through the institution email.

All notices concerning the course will be displayed on the respective Notice Boards.

Signature of COURSE COORDINATOR

(Venkata Suresh Reddy Bhavanam)

Signature of Department Prof. Incharge Academics & Vetting Team Member

Department Of CSE-3

HEAD OF DEPARTMENT:

Approval from: DEAN-ACADEMICS
(Sign with Office Seal) [object HTMLDivElement]