

**SWARNANDHRA
COLLEGE OF ENGINEERING AND TECHNOLOGY
(AUTONOMOUS)**

SEETHARAMPURAM, NARSAPUR-534280, WG- DT, AP

DEPARTMENT OF BACHELOR OF COMPUTER APPLICATIONS (Honours)

TEACHING PLAN

Course Code	Course Title	Year / Sem.	Branch	Contact Hr/ week	Academic Year
24BC4L03	JAVA PROGRAMMING LAB	II/IV	BCA	3	2025-26

Course Objectives:

The aim of this course is to

- Practice object-oriented programming in the Java programming Language
- implement Classes, Objects, Methods, Inheritance, Exception, Runtime Polymorphism,
- User defined Exception handling mechanism
- Illustrate inheritance, Exception handling mechanism, JDBC connectivity
- Construct Threads, Event Handling, implement packages

Course Outcomes (Cos): At the end of the course, student will able to

CO No	Course Outcome	Knowledge Level (K)
CO1	Apply fundamental Java concepts including data types, control structures, classes, constructors, and method overloading.	K3
CO2	Implement Object-Oriented Programming concepts such as inheritance, interfaces, abstract classes, and polymorphism.	K4
CO3	Develop programs using exception handling and multithreading with synchronization techniques.	K4
CO4	Demonstrate the use of Java Packages, String handling, and file operations.	K3
CO5	Build Java applications with database connectivity using JDBC for CRUD operations.	K5

S.No	Program	Proposed Number of Labs
1	<p>Exercise 1:</p> <p>a) Write a JAVA program to display default value of all primitive data type of JAVA</p> <p>b) Write a java program that display the roots of a quadratic equation $ax^2+bx=0$. Calculate the discriminate D and basing on value of D, describe the nature of root.</p>	1
2	<p>Exercise 2:</p> <p>a) Write a JAVA program to search for an element in a given list of elements using binary search mechanism.</p> <p>b) Write a JAVA program to sort for an element in a given list of elements using bubble sort</p> <p>c) Write a JAVA program using String Buffer to delete, remove character.</p>	2
3	<p>Exercise 3:</p> <p>Write a JAVA program to implement class mechanism. Create a class, methods and invoke them inside main method.</p> <p>b) Write a JAVA program implements method overloading.</p> <p>c) Write a JAVA program to implement constructor.</p> <p>d) Write a JAVA program to implement constructor overloading</p>	2
4	<p>Exercise 4:</p> <p>a) Write a JAVA program to implement Single Inheritance</p> <p>b) Write a JAVA program to implement multi-level Inheritance</p> <p>c) Write a JAVA program for abstract class to find areas of different shapes</p>	2
5	<p>Exercise 5:</p> <p>a) Write a JAVA program give example for "super" keyword.</p> <p>b) Write a JAVA program to implement Interface.</p> <p>c) Write a JAVA program that implements Runtime polymorphism</p>	1
6	<p>Exercise 6:</p> <p>a) Write a JAVA program that describes exception handling mechanism</p> <p>b) Write a JAVA program Illustrating Multiple catch clauses</p> <ul style="list-style-type: none"> • Write a JAVA program for creation of Java Built-in Exceptions • Write a JAVA program for creation of User Defined Exception 	1

7	Exercise 7: a) Write a JAVA program that creates threads by extending Thread class. First thread display "Good Morning "every 1 sec, the second thread displays "Hello "every 2 seconds and the third display "Welcome" every 3 seconds, (Repeat the same by implementing Runnable) b) Write a program illustrating is Alive and join () c) Write a JAVA program that import and use the user defined packages	2
8	Exercise 8: a) Write a java program that connects to a database using JDBC b) Write a java program to connect to a database using JDBC and insert values into it and delete values from it	2


Faculty


Head of the Department


Principal