SWARNANDHRA
COLLEGE OF ENGINEERING & TECHNOLOGY
(AUTONOMOUS)
Accredited by National Board of Accreditation, AICTE, New Delhi, Accredited by
NAAC with "A" Grade – 3.32 CGPA, Recognized under 2(f) & 12(B) of UGC Act 1956,
Approved by AICTE, New Delhi, Permanent Affiliation to JNTUK, Kakinada
Seetharampuram, W.G.DT., Narsapur-534280, (Andhra Pradesh)

DEPARTMENT OF INFORMATION TECHNOLOGY
TEACHING PLAN

Course Code	Course Title	Semester/ Regulation	Branch	Contact Periods /Week	Academic Year	Date of commencement of Semester
20IT3T03	Java Programming	III (R20)	IT	6	2023-2024	07-08-2023

COURSE OUTCOMES	
1	Know the concepts of OOP and orientation towards Java programming.
2	Apply the inheritance and packages in Java.
3	Implement the concepts of Exception handling and Multithreading.
4	Getting knowledge of I/O concepts and should be able to read and write data from and to File and Http Client.
5	Know the concepts and usage of Collection framework.

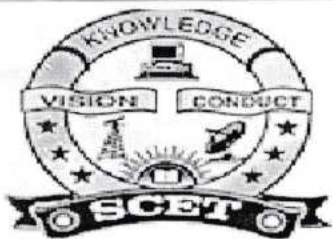| UNIT	Out Comes / Bloom's Level	Topics No.	Topics/ Activity	Text Book/ Reference	Contact Hour	Delivery Method
I	CO – 1	1.1	**Introduction to Java:** History, java features	T1,T2	1	Chalk & Board Power point presentations Assignment Test
		1.2	JDK, JRE, and JVM	T1,T2	1	
		1.3	Program structure, Creating and Executing a Java program	T1,T2	1	
		1.4	Java tokens, Variables, Arrays	T1,T2	1	
		1.5	Data types, Operators, Expressions	T1,R1	1	
		1.6	**Control statements:** Selection , Iterative and Jump Statements	T1,R1	1	
		1.7	Type conversion and casting	T1,R1	1	
		1.8	**Classes and objects:** Class declaration, creating objects, methods	T1,R1	1	
		1.9	**Constructors:** Types of constructors: Default and Parameterized constructors	T1,R1	1	

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		1.10	Overloading methods and constructors	T1,R1	1	
		1.11	Garbage collection	T1,T2	1	
		1.12	Access control	T1,T2	1	
		1.13	static and this keywords	T1,T2	1	
		1.14	Command line arguments,	T1,T2	1	
		1.15	Nested classes	T1,T2	1	
Content beyond syllabus		1.16	Unicode System, Java Naming Convention	R2	1	
		Total			16	
II	CO – 2	2.1	**Inheritance:** Extending a class, types of inheritance	T1,R2	1	Chalk & Board Power point presentations Assignment Test
		2.2	super keyword, final keyword	T1,R2	1	
		2.3	overriding methods	T1,R2	1	
		2.4	Abstract methods and classes	T1,R2	1	
		2.5	**Interfaces:** Defining an interface, implementing interface	T1,R2	1	
		2.6	Differences between classes and interfaces	T1,R2	1	
		2.7	Variables in interface and extending interfaces	T1,R2	1	
		2.8	**Packages:** Java API packages	T1,R2	1	
		2.9	Creating and importing packages	T1,R2	1	
		2.10	Importance of CLASSPATH	T1,R2	1	
Content beyond syllabus		2.11	Wrapper classes in Java	R1	1	
		Total			11	
III	CO – 3	3.1	**Exception handling:** Exception handling fundamentals	T1,R2	1	Chalk & Board
		3.2	exception hierarchy	T1,R2	1	
		3.3	usage of try, catch, throw	T1,R2	1	
		3.4	throws and finally keywords	T1,R2	1	
		3.5	built-in and user defined exceptions	T1,R2	1	
		3.6	**Multithreading:**	T1,R2	1	

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			Introduction			Power point presentations
		3.7	Differences between multi-threading and multitasking	T1,R2	1	presentations
		3.8	Creating Threads	T1,R2	1	Assignment
		3.9	thread life cycle	T1,T2	1	
		3.10	thread methods, thread priorities	T1,T2	1	Test
		3.11	thread exceptions, thread synchronization	T1,R2	1	
		3.12	Inter thread communication	T1,T2	1	
		3.13	Daemon threads	T1,T2	1	
Content beyond syllabus		3.14	Exception Handling with Method Overriding in Java	R2	1	
				Total	14	
IV	CO – 4	4.1	**Input / Output Streams:** Introduction to java I/O	T1,R2	1	Chalk & Board
		4.2	Streams	T1,R2	1	
		4.3	Buffered Streams	T1,R2	1	Power point presentations
		4.4	Readers	T1,R2	1	
		4.5	Reading data from files	T1,R2	1	
		4.6	Writing data to files	T1,R2	1	
		4.7	Http Client	T1,R2	1	Assignment
		4.8	Pipelines	T1,R2	1	
Content beyond syllabus		4.9	Java Push back Input Stream Class	R3	1	Test
		Total			9	
	CO-5	5.1	**Collection Framework:** Lists	T1,T2	1	Chalk & Board
		5.2	Array List & Linked List	T1,T2	1	
		5.3	Sets – Hash Set & Tree Set	T1,T2	1	
		5.4	Maps – Hash Map & Tree Map	T1,T2	1	Power point presentations
		5.5	Queue	T1,T2	1	
		5.6	Stack	T1,T2	1	
		5.7	Iterator – List Iterator	T1,T2	1	Assignment
		5.8	Lambda Expressions	T1,T2	1	
		5.9	**Strings:** Strings in java	T1,T2	1	Test
		5.10	Creation of a String and String handling methods	T1,T2	1	

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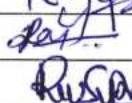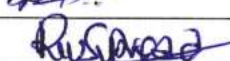|					
	5.11	String Builder	T1,T2	1	
	5.12	String Buffer	T1,T2	1	
			Total	**12**	
		CUMULATIVE PROPOSED PERIODS		**62**	

Text Books:

S.No	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	Herbert Schildt: "Java The complete reference", 11th Edition, Tata McGraw Hill, 2019.
2	E.Balaguruswamy: "Programming with Java A Primer", 5th Edition, Tata McGraw Hill, 2017.

Reference Books:

S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	Saurabh Chaudhary and Sachin Malhotra, Programming in Java by, revised 2nd edition, Oxford, 2018.
2	Dietal, Java: How to Program, 8/e, PHI, 2018.
3	Dr. R. Nageswara Rao, Wiley, Core JAVA: An integrated approach, Dream Tech, 2016

Web Details:

1	https://java.meritcampus.com/core-java-topics
2	https://www.geeksforgeeks.org/java/
3	https://www.javatpoint.com/java-tutorial
4	https://beginnersbook.com/java-tutorial-for-beginners-with-examples/

		Name	Signature with Date
i.	Faculty	Mr. K.Raja	
ii.	Module Coordinator	Mr. CH. R K Raju	
iii.	Programme Coordinator	Dr. RVVSV Prasad	

Principal