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 ELECTRONICS AND COMMUNICATION ENGINEERING

TEACHING PLAN

Course Code	Course Title	Course / Semester	Branch	Contact Hrs/Week	Academic Year	Date of commencement of Semester
16CS7E05	OOPS Through Java	B.Tech / VII	ECE	5	2021-2022	4/10/2021

COURSE OUTCOMES:

1	Define the difference between procedural oriented programming and object oriented programming (OOP) paradigms, Java features, Apply OOP Concepts. [K1]
2	Apply the java control statements and String Class.[K3]
3	Apply the concept of Inheritance and polymorphism.[K3]
4	Apply the Packages and Interfaces. [K3]
5	Describe the Exception handling and Applets. [K2]
6	Analyze the concepts of Multithreading. [K4]

Unit No.	Out Comes		TOPIC(S)	Book Reference	Contact Hours	Delivery Method
		UNIT I: INTRODUCTION TO JAVA		T1	1	Chalk & Talk
1	CO1: Define the difference between procedural oriented programming and object oriented programming (OOP) paradigms, Java features, Apply OOP Concepts. [K2]	1.1	History , Java features.	T1	1	Chalk & Talk
		1.2	Java Environment JDK1.8 ,API.	T1	1	Chalk & Talk
		1.3	Types of java program	T1,T2	1	Chalk & Talk
		1.4	Creating and Executing a Java program	T1	1	Chalk & Talk
		1.5	Java Tokens: Keywords, Character set, Identifiers, Literals, Separator	T1	1	Chalk, PPT & Talk
		1.6	Java Virtual Machine (JVM).	T1	1	Chalk & Talk
		1.7	Command Line Arguments Comments in Java program	T1	1	Chalk & Talk
		1.8	Paradigms of Programming Languages	T1,T2	1	Chalk & Talk
		1.9	Basic concepts of Object	T1	1	Chalk &

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	1.8	Paradigms of Programming Languages	T1,T2	1	Chalk & Talk
	1.9	Basic concepts of Object Oriented Programming	T1	1	Chalk & Talk
	1.10	Differences between Procedure Oriented Programming and Object Oriented. Programming	T1	1	Chalk, PPT & Talk
	1.11	Objects and Classes	T1	1	Chalk & Talk
	1.12	Data abstraction and Encapsulation, Inheritance, Polymorphism	T1	1	Chalk, PPT & Talk
	1.13	Benefits of OOP ,Application of OOPs.	T1	1	Chalk, PPT & Talk
	Content beyond Syllabus	WRAPPER CLASSES	T1	1	Chalk & Talk
		Total		**14**	
	2	**JAVA BASICS**			
CO2: Apply the java control statements and String Class.[K3]	2.1	Constants ,Variables, Data types ,Scope of variables , Type casting	T1	1	Chalk & Talk, PPT
	2.2	Operators: Arithmetic ,Logical, Bit wise operator ,Increment and Decrement ,Relational, Assignment,Conditional , Special operator	T1, T2	1	Tutorial, Active Learning & Case Study
	2.3	Expressions , Evaluation of Expressions.	T1, T2	1	Chalk & Talk, PPT
	2.4	Decision making and Branching	T1	1	Chalk & Talk, PPT
	2.5	Simple if statement, if ,else statement , Nesting if else, else if Ladder	T1	1	Chalk & Talk, PPT
	2.6	switch statement	T1	1	Chalk & Talk, PPT
	2.7	Decision making and Looping: while loop ,do – while loop,for loop, break ,continue Statement.	T1	1	Chalk & Talk, PPT
	2.8	Arrays: One Dimensional Array Creating an array ,Array processing, Multidimensional Array.	T1, T2	1	Chalk & Talk, PPT
	2.9	Constructors , Method overloading	T1, T2	1	Chalk & Talk,

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						PPT
		2.10	Static members ,Nesting of Methods	T1, T2	1	Chalk & Talk, PPT
		2.11	this keyword, Command line input ,Simple programs	T1, T2	1	Chalk & Talk, PPT
		2.12	Strings: String Array , String Methods ,String Buffer and String Builder Class, Simple programs	T1, T2	1	Chalk & Talk, PPT
		Content beyond Syllabus	GARBAGE COLLECTOR	T1	1	Chalk & Talk, PPT
				Total		13
		3	**INHERITANCE AND ACCESS MODIFIERS**			
3	CO3: Apply the concept of Inheritance and polymorphism.[K3]	3.1	Defining a subclass, Deriving a sub class	T1, R1	1	Chalk & Talk, PPT, Lab, Tutorial
		3.2	Single Inheritance, Multilevel Inheritance	T1	1	Chalk & Talk, PPT, Lab,
		3.3	Hierarchical Inheritance.	T1	1	Lab, Tutorial
		3.4	Overriding methods	T2	1	Chalk & Talk
		3.5	Final variables and methods	T1, R1	1	Chalk & Talk
		3.6	Final classes.	T1	1	PPT, Lab, Tutorial
		3.7	Abstract methods and classes.	T1, R1	1	PPT, Lab, Tutorial
		3.8	super keyword	T2	1	PPT, Lab, Tutorial
		3.9	Visibility Control: public access, private access, protected.	T1, R2	1	Chalk & Talk
		Content beyond Syllabus	SERIALIZATION	T1,R1	1	Chalk & Talk
				Total		10
			CYCLE-I EXAM			
			UNIT IV: INTERFACES AND PACKAGES			
	Apply the Packages and Interfaces . [K4]	4.1	Multiple Inheritance	T1	1	Chalk & Talk
		4.2	Defining interface	T1, T2	1	Chalk &

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4		4.3	Extending interface Implementing Interface	T1	1	Talk / Chalk & Talk
		4.4	Accessing interface variables Simple programs.	T1	1	Chalk & Talk
		4.5	Member access rules, super uses	T1, T2	1	Chalk & Talk
		4.6	Using final with inheritance, polymorphism, abstract classes.	T1,R1	1	Chalk & Talk, PPT, Tutorial
		4.7	Java API Packages System Packages	T1,T2	1	Chalk & Talk
		4.8	Naming Conventions	T1,T2	1	Chalk & Talk
		4.9	Creating & Accessing a Package Adding Class to a Package Hiding Classes – Programs.	T1	1	Chalk & Talk, PPT, Tutorial
		Content beyond Syllabus	SET	T1	1	Chalk & Talk
			Total		**10**	
5	CO5 Describe the Exception handling and Applets. [K2]	5	**EXCEPTION HANDLING AND APPLETS**			
		5.1	Limitations of Error handling	T1, T2	1	Chalk & Talk, PPT
		5.2	Advantages of Exception Handling	T1, T2	1	Chalk & Talk, PPT
		5.3	Types of Errors	T1, T2	1	Chalk & Talk, PPT
		5.4	Basics of Exception Handling	T2	1	Chalk & Talk
		5.5	Exception Hierarchy	T1	1	Chalk & Talk
		5.6	try blocks ,throwing an exception, catching an exception, finally statement	T2	1	Chalk & Talk,lab,tutorial
		5.7	built-in and user defined exceptions.	T2	1	Chalk & Talk
		5.8	Applets: Introduction ,Applet Life cycle	T1,R1	1	Chalk & Talk,lab,tutorial
		5.9	Creating & Executing an Applet.	T1	1	Chalk & Talk,lab,tutorial
		Content beyond Syllabus	HASHMAP	T1,R1	1	Chalk & Talk,lab,tutorial
			Total		**10**	

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					torial
6				1	Chalk & Talk, lab, tutorial
	6.2	Differences between multi-threading and multitasking,	T1		
	6.3	Creating Threads,	T1	1	Chalk & Talk, lab, tutorial
	6.4	Running Thread,	T1	1	Chalk & Talk, lab, tutorial
	6.5	Life Cycle of a Thread	T1	1	Chalk & Talk, lab, tutorial
	6.6	Thread Methods	T1	1	Chalk & Talk
	6.7	Thread Priority,	T1	1	Chalk & Talk
	6.8	Synchronization	T1	1	Chalk & Talk
	6.9	Implementing runnable interface and thread groups.	T1	1	Chalk & Talk
	Content beyond Syllabus	GENERIC	T1	1	Chalk & Talk
			Total		**10**

CUMULATIVE PROPOSED PERIODS	67

Text Books:

S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	Dr.R.Nageswara Rao, Core JAVA An Integrated Approach,10/e,2017
2	Herbert schildt, Java: The complete reference, 11/e,TMH. 2018

Reference Books:

S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	SIA Experts, OOPS Through JAVA,SIA Publishers & Distributors Pvt Ltd, 2019
2	Herbert Schildt, Java: The Complete Reference , 12 Dec 2018
3	Sachin Malhotra , Saurabh Choudhary, Programming in Java , Jan 2018

WEB REFERENCES

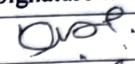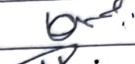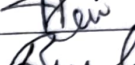| 1	https://www.javatpoint.com/
2	https://www.geeksforgeeks.org/java/
3	https://www.tutorialspoint.com/java/

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		Name	Signature with Date
i.	Faculty	N V Ratnakishor Gade	
ii.	Course Coordinator	N V Ratnakishor Gade	
iii.	Module Coordinator	K. Haritha Rani	
iv.	Programme Coordinator	Dr. B S Rao	

PRINCIPAL