

VASAVI COLLEGE OF ENGINEERING(Autonomous)

ACCREDITED BY NAAC WITH 'A++' GRADE
IBRAHIMBAGH, HYDERABAD – 500 031

Department of Computer Science & Engineering

**BASICS OF JAVA PROGRAMMING
(OPEN ELECTIVE-II)**

SYLLABUS FOR B.E. IV-SEMESTER
(COMMON FOR CIVIL, ECE, EEE & MECH)

L:T:P (Hrs./week): 3:0:0	SEE Marks : 60	Course Code : U24OE410CS
Credits : 3	CIE Marks : 40	Duration of SEE : 3 Hours

COURSE OBJECTIVES	COURSE OUTCOMES
	<i>On completion of the course, students will be able to</i>
1 Apply object oriented principles for developing an application using Java constructs.	1 Adopt the fundamentals of Object oriented system development for developing a application.
2 Design GUI using existing Java classes and interfaces.	2 Apply basic features of OOP to design an application.
	3 Employ runtime error handling, concurrent programming practices to develop a parallel processing application.
	4 Perform string handling, read and write operations using console and files IO streams.

CO-PO and CO-PSO mapping															
CO	PO												PSO		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	2	3	2	3									3		
CO2	2	3	3	3									3		
CO3	2	3	3	3	1								3	1	
CO4	2	3	3	3	1								3	1	
CO5	2	3	2	3									3		

UNIT-I: Object Oriented System Development: Understanding Object Oriented Development, Understanding Object Concepts, Benefits of Object Oriented Development.

Java Programming Fundamentals: Introduction, Overview of Java, Data types, Variables and Arrays, Operators, Control Statements.

T. Abilal.

UNIT-II: Building blocks of OOP: Classes and Methods, Constructor, Parameterized constructor, Garbage Collection, this, static, final keywords, Inheritance, types of inheritance, Method Overriding, Abstract class, Nested class, Interface, Package.

UNIT-III: Exception Handling: try, catch, throw, throws, finally, creating user defined exceptions

Multithreaded Programming: Types of Thread creation, multiple threads, isalive, join, thread priority, Thread Synchronization, Inter process communication.

UNIT-IV: String Handling: String constructors, operations, character extraction, comparison, search, modification. StringBuffer, methods, StringBuilder, StringTokenizer

Util: Date, Calendar, Random, Timer, Observable

IO: Files and Directories, I/O Classes and Interfaces, Byte Streams classes and Character Stream classes

Learning Resources:

1. Herbert Schildt, The Complete Reference Java, 7th Edition, Tata McGraw Hill 2005.
2. P. Radha Krishna, Object Oriented Programming through Java, Universities Press, 2007.
3. Sachin Malhotra, Saurabh Choudhary, Programming in Java, 2nd Edition, Oxford Press, 2014.
4. <https://docs.oracle.com/javase/tutorial/java>

The break-up of CIE: Internal Tests + Assignments + Quizzes

1	No. of Internal Tests	:	<div style="border: 1px solid black; padding: 5px; display: inline-block;">2</div>	Max. Marks for each Internal Tests	:	<div style="border: 1px solid black; padding: 5px; display: inline-block;">30</div>
2	No. of Assignments	:	<div style="border: 1px solid black; padding: 5px; display: inline-block;">3</div>	Max. Marks for each Assignment	:	<div style="border: 1px solid black; padding: 5px; display: inline-block;">5</div>
3	No. of Quizzes	:	<div style="border: 1px solid black; padding: 5px; display: inline-block;">3</div>	Max. Marks for each Quiz Test	:	<div style="border: 1px solid black; padding: 5px; display: inline-block;">5</div>

Duration of Internal Tests : 1 Hour 30 Minutes