



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with "A" Grade by NAAC

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SCHOOL OF COMPUTING

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

REVISION CARRIED OUT-2018-2019

2018-EVEN

SIT4201	PROGRAMMING IN JAVA (Theory 50 + Practical 50)	L	T	P	Credits	Total Marks
		2	0	4	4	100

COURSE OBJECTIVES

- To learn Object Oriented Programming concept using Java.
- To learn the essentials of the Java Class Library.
- To develop event driven graphical user Interface programming using OOP methodology

The course covers both theoretical and practical aspects. Marks split-up for the subject is 50% Theory and 50% Practical. Award of marks for Theory section is based on the Continuous Internal Assessments and for the Laboratory section practical examination will be conducted as per the regular University norms.

The following topics are to be covered for effective coverage of the course objective:

Class Fundamentals, Method Overriding, Inheritance, Packages, Exception Handling, Multithreading, Wrapper Classes, Input and Output Stream Classes, Byte and Character Stream Classes, Utility Packages, Applets, Swings, Database Connectivity, Regular Expressions, Networking, Java Beans

COURSE OUTCOMES :

- Java programs on Object Oriented Programming Concepts
- Use GUI for developing customer friendly applications
- To connect Java with different Databases
- Handling networking concepts Using Java classes for networking
- Usage of utility classes

Max. 45 Hours

TEXT / REFERENCE BOOKS

1. Herbert Schildt, "Java The Complete Reference", 9th Edition, McGraw Hill Education, 2014
2. <http://docs.oracle.com/javase/tutorial/>

SCS1209	Java Programming	L	T	P	Credits	Total Marks
		3	1	0	4	100

COURSE OBJECTIVES

- To understand the fundamentals of Java programming.
- To develop event driven graphical user interface programming.
- To develop software development skills for real world applications using Java.
- To gain knowledge for developing front end and backend of an application.

UNIT 1 Introduction to Java

12 Hrs.

OOP concepts –Java Byte code –Features of Java- Objects and Classes –Access specifiers- Constructors- Constructor Overloading-Method Overloading- Static and Final keywords-This keyword- Garbage Collection-Finalize method-Inheritance- Using Super- Method overriding-Abstract classes- Using final with inheritance.

UNIT 2 Interfaces , Packages & Exception Handling

12 Hrs.

Interface-Defining an interface-Implementing interfaces-Extending interfaces.

Packages-Defining a package -Importing packages-Access protection.

Exception Handling – Fundamentals-Types- Using Try and Catch- Multiple Catch clauses-throw-throws-finally.

UNIT 3 Multi Threading & IO Streams

12 Hrs.

Multi Threading - Introduction – Life Cycle of Thread-Creating and Running Threads-Methods in Thread Class-Setting the Priority of a Thread-Synchronization.

IO Streams - Introduction – Wrapper Classes- Text and Binary formats of Data – Input Stream and Output Stream classes- Reader and Writer Classes –Data Output Stream and Data Input Stream classes.

UNIT 4 Event Handling & Applets

12 Hrs.

Event Handling – Delegation Event Model-Event Classes-Event Listener Interfaces-Handling Mouse and Keyboard Events.

The Applet Class – Applet basics – Applet architecture – HTML APPLETTAG tag – Passing parameters to applets.

UNIT 5 AWT Controls & Database Connectivity

12 Hrs.

Control Fundamentals- Labels-Buttons-Checkboxes-Checkboxgroup-Lists-Scroll bars-Textfield- TextArea-Layout Managers-Flow layout-Card layout-Grid layout-Border layout-Menus.JDBC

Connectivity - Introduction –Establishing Connection – Creation of Database Tables – Entering Data into the Tables- Table Updating.

Max. 60 Hours

TEXT/REFERENCE BOOKS

1. Herbert Schildt, Java, The complete Reference, 10th edn, Mcgraw Higher Ed,2017
2. Java Tutorials: <https://www.tutorialspoint.com/java/>
3. George Reese ,Database Programming with JDBC and Java,2nd Edition, O'Reilly,2000.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks : 100

Exam Duration : 3 Hrs.

PART A : 10 questions of 2 marks each- No choice

20 Marks

PART B : 2 questions from each unit of internal choice, each carrying 16 marks

80 Marks