

TCET/FRM/IP-02/09

Revision: A

**Semester Plan
(Theory)**

Semester: III

Course: IT

Subject: JAVA PROGRAMMING

Class: SE-A

Sr. No	Prerequisite/ Bridge course:			Duration (Week /Hrs)	Mode s of Learning	Recommended Sources	
1	Basics of computer. Students are expected to have an experience to use personal computer.			4	Self Learning/ Revision	"Java-The Complete Reference",(TMGHP). "Programming with java A primer", ,(TMGHP).	
Sr. No	Mod ule No.	Lesso n No.	Topics Planned (Technology to be used)	Teaching Aids Required	Plann ed /Com pletio n Date	Resource Book Reference	Remarks
1	--	L1.1	SOP-Theory	PPT, Chalk & Board		---	
2	--	L1.2	SOP-Practical	PPT, Chalk & Board		---	
3	--	L1.3	SOP-OBE	PPT, Chalk & Board		---	
4		L1.4	Project based learning w.r.t. Software engineering aspects	PPT, Chalk & Board			
5	1	L2.1	1.1 Overview of procedure and object oriented Programming, Java Designing Goals, Features of Java Language.	PPT, Chalk & Board	17-7-17		
6	1	L2.2	1.2 Introduction to the principles of object-oriented programming: Classes, Objects, Abstraction, Encapsulation, Inheritance, Polymorphism,	PPT, Chalk & Board	20-7-17		
7	1	L3.1	1.3 Keywords, Data types, Variables, Operators, Expressions, Types of variables and methods.	PPT, Chalk & Board	24-7-17		

8	1	L3.2	1.4 Control Statements: If Statement, If-else, Nested if, witch Statement, break, continue. Iteration Statements: for loop, while loop, and do-while loop	PPT, Chalk & Board	27-7-17		
9	2	L4.1	2.1 Classes & Objects: Class Fundamentals: Assigning Object Reference Variables, Passing parameters to Methods and Returning parameters from the methods, Nested and Inner Classes.	PPT, Chalk & Board	31-7-17		
10	2	L4.2	2.2 Constructors: Parameterized Constructors, finalize() Method, Method overloading, Constructors overloading, Recursion, Command-Line Arguments.	PPT, Chalk & Board	3-8-17		
11	2	L5.1	2.3 Wrapper classes, Java.util.Scanner, Java.io.BufferedReader, Java.io.DataInputStream, Java.io.DataOutputStream and String Buffer classes and String functions.	PPT, Chalk & Board	7-8-17		
12	2	L5.2	2.4 Arrays & Vectors: One Dimensional arrays, Two Dimensional array, Irregular arrays, dynamic arrays, Array List and Array of Object.	PPT, Chalk & Board	10-8-17		
13	3	L6.1	3.1 Inheritance Basics, , Types of Inheritance in Java, Concept of Super and sub class, inheriting Data members and Methods, Role of Constructors in inheritance, Making methods and classes final , Method overriding, Dynamic Method Dispatch, Abstract classes and methods	PPT, Chalk & Board	14-08-17		
14	3	L7.1	3.2 Defining an interface, extending interfaces , implementing interfaces, accessing implementations through interface references, Interfaces vs. Abstract classes.	PPT, Chalk & Board	24-08-17		
15	3	L8.1	3.3 Packages – Steps for defining, creating and accessing a Package, importing packages, Making JAR Files for Library Packages, java.util.Vector	PPT, Chalk & Board	28-08-17		

16	4	L8.2	4.1 Exception handling Mechanism: try, catch, throw, throws and finally.	PPT, Chalk & Board	31-08- 17		
17	4	L9.1	4.2 Multithreading: Need of Multithreading , Java thread Model, thread Life-Cycle, thread class Methods, Implementing Runnable, Extending thread, Synchronizing threads, synchronized Statement, Critical Factor in Thread - Deadlock.	PPT, Chalk & Board	4-09- 17		
18	5	L9.2	5.1 Applet: Applet fundamentals, Applet lifecycle, Creating applet, paint method Applet tag, Applet class methods.	PPT, Chalk & Board	7-09- 17		
19	5	L10.1	5.2 Designing Graphical User Interfaces in Java, Components and Containers, Basics of Components, Using Containers, Layout Managers, AWT Components, Adding a Menu to Window, Extending GUI Features	PPT, Chalk & Board	11-09- 17		
20	5	L10.2	5.3 Event-Driven Programming in Java, Event- Handling Process, Event- Handling Mechanism, Delegation Model of Event Handling, Event Classes, Event Sources, Event Listeners, Adapter Classes as Helper Classes in Event Handling.	PPT, Chalk & Board	14-09- 17		
21	6	L11.1	1 Introducing Swing: AWT vs Swings, Components and Containers, Swing Packages, A Simple Swing Application, Painting in Swing,	PPT, Chalk & Board	18-09- 17		
22	6	L11.2	Designing Swing GUI Application using Buttons, JLabels, Checkboxes, Radio Buttons, JScrollPane, JList, JComboBox, Trees, Tables Scroll pane Menus and Toolbars	PPT, Chalk & Board	21-09- 17		
23	1 to 6	L12.1	Practice session	PPT, Chalk & Board	25-09- 17		

			Discussion on university question papers				
24	1 to 6	L12.2	Doubt solving session		28-09-17		
25	1 to 6	L13.1	Doubt solving session		05-09-17		
Remark:: Course:		Syllabus Coverage:		Practice Session: L15.2		Beyond Syllabus: Implementation of ADT's using JAVA	
No. of (lectures planned)/(lecture taken):25/							
Advanced Course: Advanced Java using Servlets and JSP		40 Hours		Online NPTEL videos with Hands on Training in Laboratory		Web sources: 1. NPTEL- https://onlinecourses.nptel.ac.in 2. www.tutorialpoint.com Textbook reference: O'Reilly Head First Servlets and JSP	
Text Books:							
1. Herbert Schildt, "Java-The Complete Reference", Seventh Edition, Tata McGraw Hill Publication							
2. E. Balguruswamy, "Programming with java A primer", Fifth edition, Tata McGraw Hill Publication							
Reference Books:							
1. D.T. Editorial Services, "Java 8 Programming Black Book", Dreamtech Press							
2. H. M.Deitel, P. J. Deitel, S. E. Santry, "Advanced Java 2 Platform How to Program" Prentice Hall							
3. Jaime Nino, Frederick A. Hosch, "An introduction to Programming and Object Oriented Design using Java", Wiley Student Edition.							
4. "Learn to Master JAVA, " Staredusolutions							
Mrs. Sudhir Dhekane							
Name & Signature of Faculty			Signature of HOD			Signature of Principal /Dean (Academics)	
Date:13/07/2017			Date:			Date:	
Note:							
1. Plan date and completion date should be in compliance							
2. Courses are required to be taught with emphasis on resource book, course file, text books, reference books, digital references etc.							
3. Planning is to be done for 15 weeks where 1 st week will be SOP, 2 nd -13 th for effective teaching and 14 th -15 th week for effective university examination oriented teaching, mock practice session and semester consolidation.							
4. According to university syllabus where lecture of 4 hrs/per week is mentioned minimum 55 hrs and in case of 3 lectures per week minimum 45 lectures are to be engaged are required to be engaged during the semester and therefore accordingly semester planning for delivery of theory lectures shall be planned.							
5. In order to improve score in NBA, faculty members are also required to focus course teaching beyond university prescribed syllabus and measuring the outcomes w.r.t learning course and programme objectives.							
6. Text books and reference books are available in syllabus. Here only additional references w.r.t. non -digital/ digital sources can be written (if applicable)							
7. Technology to be used in class room during lecture shall be written below the topic planned within the bracket.							