

Course: 403 : Java Programming

Course Code	403
Course Title	Java Programming Language
Credit	4
Teaching per Week	4 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparation etc.)
Review / Revision	June 2015
Purpose of Course	To teach object oriented programming concepts through programming using Java as the computer language.
Course Objective	<ol style="list-style-type: none"> 1. To make students understand object oriented programming. 2. To make students understand various inbuilt java classes those are available along with its working. 3. To make students understand the importance of OOP methodology. 4. To make students understand various types of OOP programming techniques.
Pre-requisite	Prior Knowledge of C/C++
Course Out come	After studying this, students will be able to understand how OOP principles work and importance of various coding techniques of OOP. This course will also help students to appreciate the role of inbuilt classes. After successful completion students will be able to follow particular programming methodology and how to apply it for their application.
Course Content	<p>Unit 1. Introduction to Java</p> <ol style="list-style-type: none"> 1.1. Properties of Java 1.2. Comparison of java with C++ 1.3. Java Compiler 1.4. Java Interpreter <p>Unit 2. Basic Concepts</p> <ol style="list-style-type: none"> 2.1. Identifier, Literals , Operators , Variables 2.2. Keywords 2.3. Data Types 2.4. Branching: If – Else, Switch 2.5. Looping : While, Do-while , For 2.6. Type Casting. 2.7. Strings <ol style="list-style-type: none"> 2.7.1. Basic String operations 2.7.2. String comparison 2.7.3. String Buffer class. <p>Unit 3. Classes and Objects</p> <ol style="list-style-type: none"> 3.1. Simple Class, Field 3.2. Access Controls, Object creation 3.3. Construction and Initialization 3.4. Methods, this pointer 3.5. Overloading Methods & Constructors. 3.6. Static members, static block, static class 3.7. Inheritance, super, abstract class, overriding methods

	<p>3.8. Interfaces</p> <p>3.8.1. Introduction to Interfaces.</p> <p>3.8.2. Interface Declaration.</p> <p>3.8.3. Inheriting and Hiding Constants.</p> <p>3.8.4. Inheriting, Overloading and Overriding Methods.</p> <p>3.8.5. Interfaces Implementations</p> <p>Unit 4. Packages, The Applet Classes</p> <p>4.1. Package Naming, Type Imports</p> <p>4.2. Package Access, Package Contents</p> <p>4.3. Package Object and Specification</p> <p>4.4. Applet Basics, Applet Architecture</p> <p>4.5. Applet skeleton, Applet Display Methods</p> <p>4.6. HTML APPLET Tag (<APPLET>), Applet Viewer</p> <p>4.7. Passing Parameters to Applets</p> <p>Unit 5. Exceptions</p> <p>5.1. Introduction to Exceptions</p> <p>5.2. Exception Types, User defined Exception</p> <p>5.3. Throw, Throws</p> <p>5.4. Try, Catch and Finally</p> <p>5.5. Thread</p> <p>5.5.1. Introduction to Threads</p> <p>5.5.2. Thread Model</p> <p>5.5.3. Priority of Threads</p> <p>5.5.4. Inter Thread Communication</p> <p>5.5.5. Synchronization</p>
Reference Books	<ol style="list-style-type: none"> 1. Java Programming Language – Ken Arnold James Gosling, David Holmes:–Addison Wesley (Pearson Education) 2. Java – The complete reference, – Herbert Schildt :- Tata McGraw Hill 3. Java 2 From Scratch: – Steven Haines:–PHI. 4. Programming in Java – E-Balaguruswamy: – Tata McGraw Hill 5. Java : How to Program :- Deitel & Deitel: – PHI
Teaching Methodology	Class Work, Discussion, Self Study, Seminars and/or Assignments
Evaluation Method	30% Internal assessment. 70% External assessment.