Course Number and Name

BEE046 & Java Programming

Credits and Contact Hours

3 & 45

Course Coordinator's Name

Ms.Kavitha

Text Books and References

Text Books:

1. Cay S. Horstmann and Gary Cornell, "Core Java: Volume I – Fundamentals", Eighth Edition, Sun Microsystems Press, 2008.
2. K. Arnold and J. Gosling, "The JAVA programming language", Third edition, Pearson Education, 2000.

References:

1. Timothy Budd, "Understanding Object-oriented programming with Java", Updated Edition, Pearson Education, 2000.
2. C. Thomas Wu, "An introduction to Object-oriented programming with Java", Fourth Edition, Tata McGraw-Hill Publishing company Ltd., 2006.
3. http://www.tutorialspoint.com/java/java_overview.htm

Course Description

To enable the students to becomes as java professional and able to work in real time environment.

Prerequisites	Co-requisites
Fundamentals of computing	Nil
required, elective, or selected elective (as per Table 5-1)	
Required	

Course Outcomes (COs)

CO1: Understand fundamentals of programming such as variables, conditional and iterative execution, methods, etc.
CO2: Have the ability to write a computer program to solve specified problems
CO3: Understand fundamentals of object-oriented programming in Java, including defining classes, invoking methods, using class libraries, etc.
CO4: Understand the basics of event handling, swing components and exception handling
CO5: Understand the basics of Multi-threaded programming

Student Outcomes (SOs) from Criterion 3 covered by this Course

COs/SOs	a	b	c	d	e	f	g	h	i	j	k	l
CO1									M			L
CO2									M			L
CO3									M			L
CO4									M			L
CO5									M			L

List of Topics Covered

UNIT I INTRODUCTION TO OBJECT ORIENTED PROGRAMMING 9

Object oriented programming concepts – objects – classes – methods and messages – abstraction and encapsulation – inheritance – abstract classes – polymorphism.- Objects and classes in Java – defining classes – methods - access specifiers – static members – constructors – finalize method

UNIT II INHERITANCE 9

Arrays – Strings - Packages – Java-Doc comments –- Inheritance – class hierarchy – polymorphism – dynamic binding – final keyword – abstract classes

UNIT III GRAPHICS PROGRAMMING 9

The Object class – Reflection – interfaces – object cloning – inner classes – proxies - I/O Streams - Graphics programming – Frame – Components – working with 2D shapes.

UNIT IV JAVA SWING 9

Basics of event handling – event handlers – adapter classes – actions – mouse events – AWT event hierarchy – introduction to Swing – Model-View-Controller design pattern – buttons – layout management – Swing Components – exception handling – exception hierarchy – throwing and catching exceptions.

UNIT V GENERIC PROGRAMMING&MULTITHREADING 9

Motivation for generic programming – generic classes – generic methods – generic code and virtual machine – inheritance and generics – reflection and generics - Multi-threaded programming – interrupting threads – thread states – thread properties – thread synchronization – Executors – synchronizers.