The course is designed to impart knowledge and develop skills required to solve real world problems using object oriented approach with java language as a tool. It aims at developing skills in programming and problem solving. It would introduce the concepts of object oriented programming and java, structures in java, abstraction, objects and classes, inheritance, polymorphism, encapsulation and GUI programming.

Course topics:

1. Class, Object, Generalization, Inheritance, Encapsulation, Polymorphism, Data Abstraction and information hiding.
2. Comparison between structured Programming and Object Oriented Programming.
3. Data types, Variables, Operators, Control Structures: if/else, switch, for, while, do/while, break, continue.
4. Aggregation, Constructs, Abstract Class, Multiple Inheritance, Link.
5. Java Application and Java Applet, methods, array handling, overloading: operator, function, String handling, inheritance, interface and inner class.
6. ADT, Graphical User Interface, Exception handling, Multithreading, Files and Streams, Graphics, Packages, Developing classes, applets and applications.

Reference:

2. Thinking in Java By Bruce Eckel
3. Java in a nutshell: a desktop quick reference By David Flanagan
4. Java black book By Steven Holzner

Evaluation:
Continuous evaluation will be carried out with weightage as follows (may be slightly modified later): Assignments and Lab submissions – 15 to 20%, In sem Examinations (two) – 35 to 40%, Endsem Examination – 40 to 50%. Total marks out of 100 will be converted to letter grade point using a curve (modified normal distribution).