Course Code: EEE 32502

Java programming & applications

Assessment criteria

Theory

10 lectures

Practical

8 labs 10 marks

1 test 10 marks

1 project 10 marks

Exam

1 exam paper 70 marks

Textbooks

Required Textbooks:

1. Introduction to Java programming, By Y.Daniel Liang Pearson Publication

2. Java The Complete Reference 9th Edition, Herbert Schildt, McGraw Hill

Reference Books:

1. Java How to Program, Sixth Edition, H.M.Dietel and P.J.Dietel, Pearson Education

Course content

Basic topics
1. Overview of Object-Oriented Programming and Java
2. Java Programming Elements
3. Input-Output Handling in Java
4. Encapsulation
5. Inheritance
6. Exception Handling
7. Multithreaded Programming

Advanced topics
1. Java Applets and Servlets
2. Java Swing and Abstract Windowing Toolkit (AWT)
3. Networking with Java
4. Java Object Database Connectivity (ODBC)
5. Interface and Packages for Software Development

Learning outcomes

1. Provide knowledge of object-oriented paradigm OOP.

2. Use the syntax and semantics of java programming language and basic concepts of OOP.

3. Develop reusable programs using the concepts of inheritance, polymorphism, interfaces and packages.

4. Apply the concepts of Multithreading and Exception handling to develop efficient and error free codes.

5. Design event driven GUI and web related applications which mimic the real world scenarios.