

**J2EE.****Theory L/T (Hours per week): 4/0, Credit: 4****Module-I:**

Enterprise Java Programming: Overview, Java EE 6 API, Web Applications, Java Servlet Technology: - Lifecycle of a Servlet, Servlet API, Servlet Packages, Types of servlets, Database Access, Stateless and Stateful protocols, Session Tracking. JSP Technology: - Architecture & Anatomy of JSP Page, JSP life cycle, JSP with MVC Architecture, Dynamic webpage Creation, Scripting Elements, Session Tracking, Database access, JSTL, JavaServer Faces (JSF) Technology, Facelets, Ajax.

**Module-II:**

Web Services: JAX P: SAX,DOM,, JAX B:XJC, Marshaling , Unmarshaling , WSDL, JAX-WS: Apache axis 2 implementation contract first, contract last ,Building consumer , RPC encoded , RPC literal , Document /Encoded , Document /Literal, Document/Wrapped , SOAP. JAX-RS

**Module-III:**

Advanced Technologies – Frameworks:

**Struts:** Introduction, Features and Architecture, The MVC Design Pattern,

**Hibernate:** Introduction to O-R Mapping, Hibernate Basics, Hibernate Architecture, Hibernate Configurations, POJO (Plain Old Java Classes) classes and O/R Mapping, Hibernate Query Language.

**Module-IV:**

**Spring** : IOC, dependency Injection , Constructor injection, setter injection , type, index , name attributes , Collection injection , Bean inheritance, IDRef, Bean aliasing , Bean scopes , Automating,

Nested bean factories, dependency Check, dependency On, Aware interface, static factory method, Instance factory method, Factory Bean, Method replacement , look up method injection , Properties editors , Internationalizations( l18 N), Bean POST Processor , Bean factory POST Processor , Event Factory vs Application Context , Spring AOP, Spring Integration with Hibernate, Spring integration with Struts, Introduction to design pattern.

**Books:**

1. Eric Jendrock, D. Carson, I. Evans, D. Gollapudi, K. Haase, C. Srivastha, "The Java EE6 Tutorial", Volume-1, Fourth Edition, 2010, Pearson India, New Delhi. Chapters: 1, 3, 4, 5, 7, 9 to 12, 14 to 16, 17, 19, 23, 26, 27, 28.
2. Ralph Moseley, "Developing Web Applications", 2008, Wiley India, New Delhi.
3. Kongent S., "Java Server Programming (JEE 6) Black Book, Platinum Edition", 2008, Dreamtech / Wiley India Pvt. Ltd.
4. David Geary, Cay S. Horstmann, "Core JavaServer Faces", Second Edition, 2007, Pearson Education, Inc. New Delhi.
5. Java 7 JAX-WS Web Services by Deepak Vohra
6. Building a Restful Web Service with Spring by Ludovic Dewailly
7. Spring in Action by Craig Walls
8. Hibernate in Action by Christian Bauer Gavin King