

AIM:

To provide an overview of Service Oriented Architecture and enable the student to create applications in a collaborative environment.

OBJECTIVES:

- To study the importance of Service Oriented Architecture.
- Implementation of SOA in the Java and .NET frameworks.
- To study the advanced features of SOA.

UNIT I SOA BASICS 9

Introduction – Service Oriented Enterprise – Service Oriented Architecture (SOA) – SOA and Web Services – Multi-Channel Access – Business Process management – Extended Web Services Specifications – Overview of SOA – Concepts – Key Service Characteristics – Technical Benefits – Business Benefits

UNIT II WEB SERVICES 9

SOA and Web Services – Web Services Platform – Service Contracts – Service-Level Data Model – Service Discovery – Service-Level Security – Service-Level Interaction patterns – Atomic Services and Composite Services – Proxies and Skeletons – Communication – Integration Overview – XML and Web Services - .NET and J2EE Interoperability – Service-Enabling Legacy Systems – Enterprise Service Bus Pattern

UNIT III COMPOSING WEB SERVICES 9

Multi-Channel Access – Business Benefits – SOA for Multi Channel Access – Tiers – Business Process Management – Concepts – BPM, SOA and Web Services – WS-BPEL – Web Services Composition

UNIT IV JAVA WEB SERVICES 9

Java Web Services – JAX APIs – JAXP – JAX-RPC – JAXM – JAXR – JAXB

UNIT V WEB SERVICE TRANSACTION 9

Metadata Management – Web Services Security – Advanced Messaging – Transaction Management

TOTAL= 45 PERIODS

TEXTBOOKS:

1. Eric Newcomer, Greg Lomow, "Understanding SOA with Web Services", Pearson Education, 2005.
2. James McGovern, Sameer Tyagi, Michael E Stevens, Sunil Mathew, "Java Web Services Architecture", Elsevier, 2003. (Unit 4)

REFERENCES:

1. Thomas Erl, "Service Oriented Architecture", Pearson Education, 2005.
2. Frank Cohen, "FastSOA", Elsevier, 2007.
3. Scott Campbell, Vamsi Mohun, "Mastering Enterprise SOA", Wiley, 2007.
4. Eric Pulier, Hugh Taylor, "Understanding Enterprise SOA", Dreamtech Press, 2007.
5. Jeff Davies, "The Definitive Guide to SOA", Apress, 2007.
6. Sandeep Chatterjee, James Webber, "Developing Enterprise Web Services", Pearson Education, 2004.