

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Semester: 1

Computer Science & Engineering

Subject Name Service Oriented Architecture

| Sr.No | Course content |
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| 1. | Introduction :Brief history of information technology , Concepts of Distributed Computing, XML |
| 2. | Enterprise architectures -Integration versus interoperation , J2EE ,.NET, Model Driven Architecture |
| 3. | Basic concepts -Directory services ,SOAP ,WSDL ,UDDI ,Web Services: Definition, Architectures and Standards |
| 4. | Principles of Service-Oriented Architecture- Service-orientation and object-orientation, SOA Standards Stack, SOA with Web Services, Key Principles of SOA,WS-* Specifications: Message Exchange Pattern,Coordination,Atomic Transactions,Business Activities,Orchestration,Choreography,WS-Addressing,WS-ReliableMessaging,WS-Policy (including WS-PolicyAttachments and WS-PolicyAssertions),WS-MetadataExchange,WS-Security (including XML-Encryption, XML-Signature, and SAML),WS-Notification Framework (including WS-BaseNotification, WS-Topics, and WS-BrokeredNotification),WS-Eventing |
| 5. | Principles of Service-Oriented Computing- RPC versus Document Orientation,Service Life Cycle,Service Creation ,Service Design and Build,Service Deployment,Publish Web service using UDDI,Service Discovery ,Service Selection ,Service Composition ,Service Execution and Monitoring,Service Termination ,Service Composition and Modeling Business Processes with Business Process Execution Language (BPEL) |

Reference Books:

1. SOA Using Java™ Web Services by Mark D. Hansen
2. SOA Design Pattern By Thomas Erl PHI
3. Web service contract Design & Versioning for SOA by Thomas Erl PHI
4. SOA with .NET by Rajbalasubhramaniam Prentice Hall