

Department of Information Technology

B.Tech VII semester

Scheme of work for **Middleware Technologies**(13CT1131)

Course outcomes defined in 2013-14 are fine tuned in 2014-15 according to the suggestions made by BOS

- CO 1** Define object middleware and use web services.
- CO 2** Describe technical issues in middleware.
- CO 3** Discover the use of middleware in building distributed technologies.
- CO 4** Associate security issues with distributed applications
- CO 5** Classify different business processes.

Week	Topic / Contents	Course Outcomes	Sample Questions	Teaching Learning Strategy	Assessment method and Schedule
1	Unit-1: Introduction to e-business, Introduction to IT Architecture, Remote procedure calls, Remote database access.	CO1	1. What is a Remote Procedure call 2. Define the term “ <i>IT Architecture</i> ”	Lecture and Demonstration	Mid-Test1
2	Distributed transaction processing Message queuing, Message queuing versus distributed transaction processing Using object middleware Transactional component middleware	CO1	1. Write short notes on distributed transaction processing. 2. What is the role of object middleware in transaction processing?	Lecture	Mid-Test1
3	EJB, Final comments on TCM, Internet Applications. WEB SERVICES: Service concepts, Web services and using web services	CO1	1. What is the purpose of Enterprise Java Bean? 2. How do you utilize a web service?	Lecture and Demonstration	Mid-Test1
4	Unit-2: Middleware elements, The communications link, The middleware protocol, The programmatic interface, Data presentation, Server control, Naming and Directory services	CO2	1. List out the components of Middleware 2. Why do we need a Naming and Directory service	Lecture and Demonstration	Mid-Test1 (Assignments)
5	Security, System management, Comments on Web services, Vendor architectures, Vendor platform architectures, Vendor-distributed architectures, Using vendor architectures	CO2	1. Explain about vendor-distributed architectures 2. How security is maintained in a distributed architecture?	Lecture and Demonstration	Mid-Test1
6	Positioning, Strawman for user target architecture, Marketing, Implicit architectures, Middleware interoperability.	CO2	1. What are the issues in Middleware interoperability?	Lecture	Mid-Test1

7	UNIT-3: Purpose of Middleware Support for business processes Information retrieval, Collaboration Tiers, The presentation tier, The processing tier, The data tier,	CO3	1.List out the tiers in Distribute Architecture	Lecture	Mid-Test1 (QUIZ)
8	Services versus tiers, Architectural choices, Middleware bus architectures	CO3	1.Explain about Middleware bus architectures.	Lecture	Mid-Test1 (QUIZ)
9	Mid-Test1	CO1,CO2 and CO3			Mid-Test1 Week-9 (QUIZ)
10	Hub architectures, Web services architectures, Loosely coupled versus tightly coupled	CO3	1.Differentiate between loosely coupled ad tightly coupled	Lecture	Mid-Test2
11	UNIT-4: Introduction to security, Traditional distributed system security, Web services security, Architecture and security	CO4	1.What is web service security?	Lecture	Mid-Test2
12	Problems with today's design approaches The role of business rules Existing systems, Reuse, Silo and monolithic development	CO4	1.What are the problems with today's design approaches?	Lecture	Mid-Test2
13	The role of architecture Levels of design, Reconciling design approaches	CO4	1.Explain the significance of Architecture	Lecture	Mid-Test2 (Assignment)
14	UNIT-5: Introduction to process, Business processes, Information and processes Architecture process patterns	CO5	1.How process patterns are identified?	Lecture	Mid-Test2 (QUIZ)
15	Clarification and analysis Error Handling, Timing Migration, Flexibility	CO5	1.Write a short notes on error handling	Lecture	Mid-Test2 (QUIZ)
16	Mid-Test2	CO4 and CO5			Mid-Test2 (QUIZ)