

# GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Semester: 2

## Computer Science & Engineering

**Subject Name: Distributed Computing & Application**

Sr.No	Course content
1	Introduction to distributed computing
2	Network programming with sockets and streams
3	Inter-process communication: Remote Procedure Calls, Concurrency and multithreading
4	Parallel computing: domain and functional partitioning, parallel virtual machines – PVM, message passing interface - MPI, and performance measurements
5	Distributed Objects and Middleware Remote Method Invocation Remote Method Invocation – Internet-Inter ORB Protocol Object Persistence and Object Serialization, Object Brokers, Message-Oriented Middleware
6	Development of Enterprise applications: Use of standards J2EE / .NET to develop distributed enterprise applications
7	Introduction to XML, APIs for XML Processing
8	Enterprise Application Integration, Web Technologies, Web services: Concepts, Protocols: SOAP, WSDL, UDDI, Development of Web services
9	Introduction to cluster computing, and grid computing
10	Research issues

### Reference Books:

1. Distributed Computing – Concepts and Applications” by M. L. Liu, published by Addison-Wesley, Inc.
2. Java in Distributed System, Marko Boger, John Wiley and Sons Ltd.
3. Java Network Programming and Distributed Computing, David Reilly and Michael Reilly, Addison-Wesley
4. Web Services, Gustavo Alonso, Fabio Casati, Harumi Kuno, Vijay Machiraju, Springer Verlag
5. “Developing EJB Components”, Pravin Tulachand, published by Sun Microsystems