21CSE15	MIDDLEWARE TECHNOLOGIES	L	T	P	C
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Course Objectives

The main objective of this course is to get on awareness of a the various technologies which can help in the implementation of the various live project.

UNIT I	Emergence of Middleware	9 Hours

Introduction, Objects, Web Services, Middleware Elements, Vendor Architecture, interoperability, Middleware in distributed applications, Types of Middleware, RMI, JDBC, Client/Server CORBA Style.

UNIT II	ASP.NET	9 Hours

Introduction, Lifecycle, Server Controls, Basic Controls, Directives, Validators, Database Access, ADO.Net, File Uploading, Data Sources, Data Binding, Custom Controls, Security, Data Caching, Multithreading, Deployment.

UNIT III	Fundamentals of C#& .NET platform	9 Hours

Comprehensive .NET Assemblies. OOPs with C#, Attributes, Reflection, Properties, Indexers, Delegates, Events, Collections, Generics, Anonymous Methods, Unsafe Codes and Multithreading

UNIT IV	Web Services	9 Hours

Introduction, Architecture, Components, Security, XML Web Service Standards, Creating Web Services, Extending Web Services, Messaging Protocol, describing, discovering, securing

UNIT V	EJB	9 Hours

Java Bean Component Model, EJB Architecture, Session Bean, Java Message Service, Message Driven Bean, Entity Bean

Course Outcomes:
- Understand the basic structure of distributed systems
- Understand the motivation of using middleware
- Understand the basic concepts underlying the ASP.net and C#.net
- Learn to make judgment in choosing a suitable middleware for application problems
- Understand the basic concepts of Web Services and EJB.

Text books:
1. Wortgang Emmerich John,"Engineering Distributed Objects", Wiley, 2000.
2. Mesbah Ahmed, Chris Garrett, Jeremy Faircloth, Chris Payne, DotThatCom.com, "ASP.net web developer guide", Wei Meng Lee (Series Editor), Jonothon Ortiz (Technical Editor), Syngress Publications, 2001.

Reference Books:

1. Andrew Troelsen, "C# and the .NET Platform", A press Wiley-dreamtech, India Pvt.Ltd, 2011.
2. ".NET Web Services-Architecture and Implementation", Keith Ballinger, Pearson Education, 2002.