Course Title: Introduction to .NET Web Services, SOAP, and XML

Course Description:
Introduction to Web services and Web services standards

Course Prerequisite(s):
Introduction to VB.NET Visual Studio or Introduction to C# Visual Studio

Course Objectives:
Demonstrate knowledge of features and pitfalls of Web services, Creating Web service clients, Transport protocols and messaging.

Textbook(s):
Learning WCF
O'Reilly; 0596101627

Lesson Plan – by week or session

Session 1: Hello Indigo
Service Oriented Architecture, WCF Services, Fundamental WCF Concepts, Creating a New Service from Scratch, Generating a Service and Client Proxy, Hosting a Service in IIS, Exposing Multiple Service Endpoints

Session 2: Contracts
Messaging Protocols, Service Description, WCF Contracts and Serialization, Service Contracts, Data Contracts, Message Contracts, Approaches to Serialization, The Message Type

Session 3: Bindings
How Bindings Work, Web Service Bindings, Connection-Oriented Bindings One-Way and Duplex Communication, Large Message Transfers, Custom Bindings

Session 4: Hosting
Hosting Features, ServiceHost, Self-Hosting, Hosting on the UI Thread, Hosting in a Windows Service, Hosting in IIS 6.0, IIS 7.0 and Windows Activation Service, Choosing the Right Hosting Environment

Session 5: Instancing and Concurrency
OperationContext, Instancing, Concurrency, Instance Throttling, Load Balancing and Failover

Session 6: Reliability
Reliable Sessions, Transactions, Queued Calls

Session 7: Security
WCF Security Overview, Securing Intranet Services, Securing Internet Services, Working with Certificates, Building a Claims-Based Security Model, Exploring Federated Security

Session 8: Exceptions and Faults
SOAP Faults, WCF Exception Handling, Exceptions and Debugging, Fault Contracts, IErrorHandler