

Microsoft

Curriculum for Microsoft

We deliver all our courses as Corporate Training as well if you are a group interested in the course, this option may be more advantageous for you.

Microsoft

- SQL Server 2008 for 2 days
- VB for 7 days
- ASP for 3 days
- Access for 1 day
- VBA for 1 day
- .NET with XML for 16 days = Total 30 days
- C# 2.0 and ASP.NET 2.0 using C# (16 days)

SQL Server 2008 (2 days)

INTRODUCING SQL SERVER

Major features
Limits
Editions

BUILDING A DATABASE

Introducing SQL Server Management Studio
Databases
Tables
Indexes
Relations
Using T-SQL to build and alter objects

DIFFERENCES BETWEEN ORACLE AND SQL

Data types
Schema
Database Organization
Programming

T-SQL BASICS

What is SQL?
Reading syntax diagrams
Identifiers
Data types
Operators
Wild cards
Variables
Functions
Using sqlcmd

SELECT QUERIES

The SELECT clause
The FROM clause
The WHERE clause
Using Joins
ORDER BY
GROUP BY and HAVING
TOP N and TOP N%
OVER
Full-text search

ACTION QUERIES

DELETE
TRUNCATE TABLE
UPDATE
INSERT
SELECT INTO

VIEWS, STORED PROCEDURES, AND FUNCTIONS

Partitioning and Joining Tables with Views
Updateable views
Indexed Views
Information Schema Views
Catalog Views

Stored Procedures
Functions

ADVANCED TRANSACT-SQL

Transactions
Distributed Transactions
Row set Functions
Ranking Functions
Cursors
Structured Error Handling

TRIGGERS

INSERT triggers
DELETE triggers
UPDATE triggers
INSTEAD OF triggers
Recursive triggers
DDL triggers

VB (7 Days)

- Introduction to VB
- Standard Controls
- Declaring and using Variables
- Language Elements
- Arrays
- Functions
- Modules
- Control Arrays
- Working with Multiple forms
- Using ActiveX controls from the MS Windows Common Controls
- Common Dialog Box Control
- MDI Forms
- Using API Function Calls
- Working with Databases in VB using ADO
- Using Classes in VB6

ASP (3 Days)

- Intro to ASP
- Server Tags
- Response object o Request object
- Working across pages o Error Handling
- State mgmt with ASP o Session object
- Server object
- Application object o Global.asa
- Working with Databases o Paging
- Working with COM Dll's o Deployment
- IIS Settings

Access (1 Days)

- MS Access forms
- Features of MS Access 2003 & 2007
- Link tables

VBA (1 Days)

- Intro to Macros
- Intro to VBA

.NET with XML (16 Days)

- CLR
- Managed v/s Unmanaged code
- Elements of a .NET application
- Assembly structure
- Types of assemblies
- Types of projects in VS.NET and their applications C# Language Features (Basic
 - features like code constructs, namespaces, classes)
Classes, OO
 - Concepts(Inheritance, Polymorphism, Virtual Methods, Late Binding, Abstract Base
 - Classes, Sealed Classes, static methods, Constructors,
- Destructors)
- Properties
- Boxing/Unboxing
- Interfaces
- Delegates
- Event Handling
- Exception Handling
- Arrays
- Private /Shared Assemblies
- Probing
- Streams
- Serialization
- File Handling
- Threading

- Reflection
- Generics
- Collections
- Indexers
- Iterators
- Extension Methods o Partial Classes
- Partial Methods
- Anonymous Types, Methods o Lambdas
- LINQ-Objects
- Introduction to Win forms
 - Event driven code and examples
 - Basic controls (Label, Textbox, Button, etc) Advanced controls (Tabs, Menus, Toolbars, Status bar. Dialogs etc) Working across forms MDI forms Modal, Modeless Windows
 - Dynamic control generation
 - User Controls
 - Visual Inheritance
 - Assignments
 - Deployment(XCOPY Deployment, Wizard, Click Once Deployment)
 - ADO.NET Classes Architecture
 - Working with Sql Client and Oracle Client
 - Connecting with ODBC,OLEDB
 - Using Connection, Command, Data Reader,
 - Transactions Working with a Dataset, Data Tables Typed Datasets Data Binding Grids ADO.NET and XML relation Persisting datasets as XML Interaction with XML and XML.Net classes
 - Introduction to ASP.NET
 - Basics
 - State management
 - (Sessions, Cookies, View state, Application, Query strings) Post back and Post away forms (Cross Page posting) Validation controls Formatting Pages with CSS Master Pages Navigation Controls Themes
 - Binding with Data bound controls
 - (Grid View, Data list, Form View, Details View, Data Repeater, List View) Using Data Sources (SqlIDs, Object DS, XmlIDs, Site MapDs)
 - User Controls
 - Server Controls
 - Caching
 - (Data Caching, Output Caching, Fragment Caching, Dependencies, Sql Cache Dependency)
 - Localization
 - Web services
 - AJAX.NET
 - Authentication, Authorization, Impersonation Membership, Role Providers Web Parts Web. Config Deployment
 - Visual Studio Usage, Tips, Wizards
 - XML Parsers
 - Debut V2

- DOM and SAX
- Xml standard support in .NET
- System.XML Namespace
- Xml Document
- X Path Document
- XML Navigator
- Xml Reader and Xml Writer class
- Persisting datasets as XML
- Using MS Test

C# 2.0 and ASP.NET 2.0 using C# (16 days)

.NET Framework

.Net Framework

Taking about .Net Framework o Programming Approach
 Application Development o CLS, CTS, FCL, CLR
 Creating, Compiling and Execution of Dot Net Programs o Output of the programs (Assemblies)
 Assemblies (Private, Shared) & Use of ILDASM tool o Manifest, Metadata, MSIL, Resources
 Parts of CLR & Application Domain

C# Language Basics

Difference between Value type & Reference type o Boxing Unboxing
 Nullable Types
 Arrays, Structure, Enums

Introduction to VS 2005

OOPS

Class, Access Specifiers, Properties, Indexers
 Partial Classes
 Construction & Destruction of Objects
 Clonning & Finalize Method
 Inheritance
 Interface
 Dispose () & Using Clause
 Polymorphism, Events & Delegates
 Anonymous Methods
 Collections & Generics

File Handling & Serialization

Writing data into Binary File
 Writing data into XML File
 Difference between XML & Binary File
 Serializable & Non Serializable Attribute

ADO .Net

Connected Architecture
 Disconnected Architecture o Data Set
 Typed Data Set
 Command Object

Command Builder
Object o Connection
Object
Data Table Object
Writing Parameterized Query
WriteXMLSchema(), ReadXMLSchema(),
WriteXML(), ReadXML() o MARS
Asynchronous
Transaction Scope o SQL Bulkcopy
SMO o Load()
Reflection, Custom Attribute, Deployment
Xcopy Deployment
Using Setup & Deployment

ASP.NET

Types of Server Controls, Master pages,

State management

Types of state management
Profile & Caching techniques

ADO.NET, Caching

Object model
Data binding
Different arch and data controls

ASP.NET Security

Securing ASP.NET & Web Administrating
Applications (Lab)
Authentication,
Configuring Web Applications

Sitemap, Navigation

ASP.NET 2.0 Provider Model

1. Constructors
2. Enterprise Library (data access, logging, exception blocks)
3. How to use entity objects (as opposed to DataSets) to hold data
4. How 3 tier apps work (.Net specific – need to cover both client server and web)
5. How to debug (quick watch, watch, command window, etc) + various shortcuts
6. How to trace
7. How to build unit tests in .Net
8. ASP.Net Ajax
9. Visual Studio Solution and Project structure
10. Data validations
11. Ternary operations
12. String handling in .Net
13. Introduction to important built-in classes in .Net

14. Good coding practices for .Net
15. NHibernate (as an introduction to ORM)
16. Introduction to Config files (app as well as web)
17. JavaScript – how to write, debug
18. CSS – how to style pages using CSS, how to debug CSS errors
19. TFS (check-in / check-out, Code Analysis)
20. Windows Services

XML

Introduction to XML

Understanding Markup Languages
 Standard Generalized Markup Language
 XML Syntax Compared to HTML Syntax
 Why Use XML?
 XML Structure
 Different Parts of a Document, Physical
 ,Structure in XML
 Valid vs. Well-Formed Documents
 XML Parsers – DOM & SAX, Difference
 between DOM & SAX
 Simple XML Document Examples
 XML Syntax, Understanding XML Elements &
 Attributes

Defining a Document Type Declaration (DTD)XML Schema Definition (XSD)

DTD StructureDTD Overview (Not in detail)
 Advantages of XSD over DTD (Highlighting
 limitations of DTD) o Need for XSD
 External DTD
 Internal DTD
 The Syntax of a DTD
 Element, attribute Declaration and PCDATA o
 Creating a simple DTD
 XSD Syntax & Semantics
 XSD Datatypes – Simple & Complex
 Multiplicity & Choice
 Sample XSD Implementations – Define
 Employee XSD

Namespaces and Schemas

What are Namespaces?
 XML Namespaces
 Using Namespaces
 Identifying and declaring namespace o DTD
 Limitations
 Why Is There a Need for a Schema o The
 Basics of XML Schemas
 The Structures of an XML Schema

Schema Elements
Schema Attributes

XSLT

XPath Basics
Style Sheets
XSL Basics
What Does XSL Do?
How Does XSL Work?
Templates
XSLT Elements
Introduction to XQuery

XML using .NET

System.xml namespace
XML document parsing using XmlDocument
class o XmlReader and XMLWriter, XmlNode
classes
Creating XSD files(typed Data sets using
VS.NET) o Using XPath Query