

DIPLOMA IN WEB ENGINEERING

Web Designing, Development, Mobile Application Development Training Program



This comprehensive training program starts from the beginning of web designing and will cover all the aspects of the web development, deployment and tuning of websites. HTML 5.0, DHTML CSS 3.0, JavaScript, JQuery, Adobe Photoshop, Dreamweaver MX, Introduction to Flash, ASP.NET with SQL Server, PHP/MySQL and Database Connectivity and Mobile Application Development on Android or Apple Phone Application Development with Objective C.

This Program is ideally suited to following individuals who are:

- **New Comers**
- **Students who would like to get the knowledge of Web Designing & Development.**
- **Already working class who are willing to update and learn the new methodologies of Web Designing & Development.**
- **Who want to be good and reputable jobs in the market and are like to enhance their skills in Web Designing & Development**

Program is offered by: 3D Educators – Trainers & Consultants

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3D EDUCATORS

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Program Details

Inauguration

The Training Program will be inaugurated by a senior member of 3DEducators

Program Structure

Number of classes in a week	Two Class Per Week
Duration of each class of each Module	2-Hour
Duration of Web Designing	3 - Months
Duration of ASP.NET/ SQL SERVER	4 - Months
Duration of PHP/MySQL	4 - Months
Duration of Mobile Application Development	3 - Months

Other Learning Activities:

Classroom Assignments	8
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About the Program Designer & Instructor

The “Web Engineering” Program has been designed and will be conducted by Certified Consultant and having the vast experience of training, development & consulting. They have worked with various large Government, National, and multinational organizations at local and abroad.

The Trainers who are conducting this program are have on the position of the following:

- ✓ Web Designers
- ✓ Developers
- ✓ E-Commerce Implementers
- ✓ Deployment
- ✓ Implementers

They trainers are foreign qualified and having the degree & certification of Ph.D, MBA, MSc, Microsoft Partner, MSCE, MCDBA, A+, Web Certified, CIW, Windows Certified.

As Consultant & Senior Trainers the team of trainers from Engineering side we **3D Educators – Trainers & Consultants** would not compromise on the faculty.

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MODULE :: 1

WEB DESIGNING COURSE CONTENT

Duration: 3 Months

This module consists on designing aspect, where some renowned tools are going to teach and enable the candidate to develop a responsive website effectively.

Basic Fundamentals

Topics:

- ❖ *The Internet*
- ❖ *World wide web*
- ❖ *TCP/IP*
- ❖ *HTTP*
- ❖ *HTML 5.0*
- ❖ *URL*
- ❖ *Website*
- ❖ *Web Browser*
- ❖ *Data Access*
- ❖ *CSS 3.0*
- ❖ *JavaScript*
- ❖ *JQueries*

About Servers

- *Web Server*
- *Application Server*
- *Server technologies*

About CGI

- *Computer Graphics Interface*
- *2D Graphics*
- *3D Graphics*
- *Web Graphics and Animation*

ADOBE PHOTOSHOP CS

Introduction to Adobe Photoshop Interface

- **Image size**
- **Width**
- **Height**
- **Color mode**
- **Contents**
- **Resolution**

Color management in Photoshop

- **Foreground/Background color**
- **Color Picker And Custom Colors**
- **Selecting Default Colors**
- **Gradient**

Image Adjust

- **Levels**
- **Curves**
- **Brightness Contrast**
- **Color Balance**
- **Hue Saturation Brightness**
- **Variations**
- **Channel Mixer**
- **Replace Color**
- **Invert**
- **Posterize**
- **Threshold**

Image Mode

- **Bitmap**
- **Gray Scale**
- **Index**
- **RGB**
- **CMYK**
- **LAB**

Filters

- **Artistic**
- **Liquefy**

- *Blur*
- *Noise*
- *Render*
- *3D Transform*
- *Clouds*
- *Different Clouds*
- *Lens Flare*
- *Lighting effect*
- *Sharpen*
- *Sketch*
- *Chrome*
- *Extrude*
- *Tile*
- *Wind*
- *Mosaic tiles*
- *Grain*

Concept of Layer and Layer Option

- *Assigning Layer Properties*
- *Deleting Layer*
- *Duplicating Layers*
- *Arranging and Merging Layers*
- *Layers styles*

Drawing Tool

- *Marquee Tools*
- *Lasso Tools*
- *Magic Wand*
- *Cropping*
- *Air Brush/Pencil*
- *Air Spray*
- *Rubber*
- *Stamp*
- *Type tool*
- *Sharpen, Smudge and Blur*
- *Sponge, Dodge, Burn*
- *Ruler, Bucket*
- *Zoom*
- *Hand Tool*
- *Pen Tool and its purpose*

- ❖ ***Difference b/w Fill and Stroke***

- ❖ *Transformation of Objects*
- ❖ *Action Palette*
- ❖ *History Palette*
- ❖ *Transparent Images*
- ❖ *Layer Masking*

MACRO MEDIA FLASH

Dream weaver MX

- Introduction to Dream weaver MX*
- Configuring Environment*
- Server Technology*
- Web servers*
- Dream weaver MX Menu's*
- Window menu*
- Working in Dream Viewer MX*
- Work in Layout view*
- Add content to the page*
- Basic page element*
- Features*
- Work in Standard view*
- Use the Assets panel*
- Insert flash objects*
- Create a template*
- CSS Cascading Style Sheets*
- Applying CSS (Cascading Style Sheets)*
- Database Connection*
- Concept of database*
- Active server pages*

Introduction to Dream weaver MX

- ❖ *Interface*
- ❖ *Object Panel*
- ❖ *Property Inspector*
- ❖ *Applications*
- ❖ *Code & Design Views*

Configuring Environment

- ❖ *Web server*
- ❖ *Application Server*

❖ **Data Store**

Dream weaver Menu's

- ❖ **File menu**
- ❖ **Edit menu**
- ❖ **Insert menu**
- ❖ **Modify menu**
- ❖ **Text menu**
- ❖ **Command menu**
- ❖ **Site menu**

Window menu

- Dream weaver MX work area**
- Defining a Local Site**
- Creating the site home page**
- Designing a page Layout view**

Working in Dream Weaver MX

- **Defining a local site**
- **Creating a page in layout view**
- **Inserting an image and a rollover image**
- **Working with tables in standard view**
- **Creating a link to another document**
- **Inserting assets from the Assets panel**
- **Inserting flash text and Flash button objects**
- **Creating and applying a template**
- **Running a site report**
- **Adding a Design Note**

Work in Layout view

- **Draw layout cells**
- **Resize layout cells**
- **Add multiple layout cells**
- **Move a layout cells**
- **Group cells in a layout table**
- **Move the layout table**
- **Add another layout cell**
- **Create a layout table**
- **Draw layout cells in a table**

Add content to the page

- **Insert images**
- **Create a rollover image**

- *Create the other rollover images*
- *Preview your document*
- *Insert text format text*
- *Apply color and style*

Basic Page Element

- *Tables*
- *Layers*
- *Images*
- *Rollover images*
- *Form*
- *Form Elements*
- *Frames*

Features

- *Behavior*
- *Ref materials*
- *Asset Panel*
- *Library*
- *History*

Work in Standard view

- *Set cell properties*
- *Selecting a table*
- *Set table properties*
- *Add cell padding*
- *View the site files*
- *Linking documents*
- *Testing page*

Use the Assets panel

- *Select a new document*
- *View site assets*
- *Insert an image*
- *Insert a Flash movie*
- *Apply a color using a Assets panel*
- *Create a favorite assets list*
- *Add multiple images to favorites*
- *View favorite assets*

Insert Flash objects

- *Create a Flash Text object*
- *View the Flash Text object in the document*

- *Create a Flash button object*
- *View the Flash button in the document*

Create a template

- *Create a template from an existing page*
- *Modify the template*
- *Apply the template to a new page*
- *Editing a template-based page*
- *Create a design note*
- *Site wide reports*

CSS3.0 Cascading Style Sheets

- *Using CSS*
- *Nested Tags*
- *CSS Classes*

Applying CSS (Cascading Style Sheets)

- *Creating New Style sheets*
- *Applying New Style Sheets*
- *Applying Editable Style Sheets*

Database Connection

- *Database Panel*
- *Database Connection*

Concept of Database

- *DBMS*
- *Data Base*
- *Tables*
- *Columns*
- *Rows*
- *Fields*
- *Relative Databases*
- *Queries*
- *Keys*
- *Candidate*
- *Primary Foreign*
- *Tables Relationship*
- *One to One*
- *One to My*
- *My to My*

Connection to Database

Connection to Database using Microsoft Access.

MODULE :: 2

WEB DEVELOPMENT THROUGH ASP.NET WITH MS SQL SERVER

Total Duration : 4 Months

DOT NET FRAME WORK AND FUNDAMENTALS:

Arrays, Generics and Collections

- Iterators and Enumerators
- Lists, Queues, Stacks and Dictionaries
- Using Arrays and Collections
- Using Generics

Branching and Operators

- Assignment and Mathematical Operators
- Increment, Decrement, and Relational Operators
- Iteration Statements
- Unconditional and Conditional Branching

Delegates and Events

- Asynchronous Processing
- Callbacks
- Event Creation and Usage
- Using Anonymous Methods

Exception Handling

- Custom Exceptions
- Exception Flow
- Exception Management
- Rethrowing Exceptions

Language

Fields, Methods in Classes

Instance Constructors and Properties in Classes

Language Basics

Static Constructors and Static Classes in Classes

String and Text Handling

Working with Numbers and Enums

Object-Oriented Design

Abstract Classes and Nesting Classes

Inheritance and Polymorphism

Interfaces

Operator Overloading

Specialization and Generalization

Types and Type Members

Access Modifiers and Nested Types

Attributes

Nullable Types and Partial Types Properties and Indexers

ASP - DOT NET 4.5 – WEB BASED APPLICATION

INTRO TO ASP.NET WITH .NET FRAMEWORK

DEFINING STANDARD STYLES & THEMES

DEFINING MASTER PAGES

CREATING USER CONTROLS

CREATING CUSTOM SERVER CONTROLS

EXTENDING EXISTING CONTROLS

CREATING PORTALS

CREATING & CONFIGURING WEBPARTS

MANAGING VIEW STATE

USING STATE MANAGEMENT TECHNIQUES

ACCESSING DATA BY USING ADO.NET

GOING FURTHER WITH ADO.NET

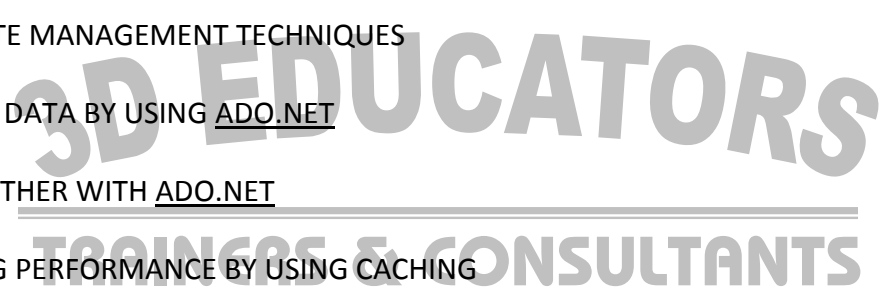
IMPROVING PERFORMANCE BY USING CACHING

MANAGING RESOURCES & LOCALIZATION

ASP.NET SECURITY ESSENTIALS

LINQ

ENTITY FRAMEWORK



MODULE :: 3

WEB DEVELOPMENT THROUGH PHP/MySQL

Total Duration : 4 Month

- *An Introduction to PHP*
- *Getting Started With Variables*
- *Conditional Logic*
- *Working with HTML Forms*
- *Programming Loops*
- *Arrays in PHP*
- *String Manipulation*
- *Create your own Functions*
- *Security Issues*
- *Working With Files In PHP*
- *Date and Time Functions in PHP*
- *PHP and MySQL*
- *Manipulate a MySQL Database*
- *PHP User Authentication*
- *Build your own PHP Survey/Poll Application*
- *How to Build an Online Forum: the database*
- *The Code for the Forum*

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MODULE :: 4 (Option 1)

MOBILE ANDROID APPLICATION DEVELOPMENT

Total Duration : 3 Month

As a result of taking this Android training course, you will be able to:

- Describe the platforms upon which the Android operating system will run.
- Create a simple application that runs under the Android operating system.
- Access and work with the Android file system.
- Create an application that uses multimedia under the Android operating system.
- Access and work with databases under the Android operating system.

Modular Outline: (Part One)

3 Hours

Module 00: Introduction to Android Programming - Course Introduction

Module 01: Android Overview and History – Part One

- How it all got started
- Why Android is different (and important)
- Native Android Applications
- Android SDK Features

Module 02: Android Overview and History (Part Two)

2 Hours

- Android Development Environment
- Elements of Android SDK
- Android Software Stack
- Android Application Architecture
- Android Libraries
- Lab Exercise: Initial Configuration of the Android SDK

Module 03: Android Stack

2 Hours

- Overview of the stack
- Linux kernel
- Native libraries
- App framework
- Apps
- Lab Exercise: Configure Initial Application, Run in Emulator

Module 04: SDK Overview

2 Hours

- Platforms
- Tools
- Versions
- Lab Exercise: Download and Create in Android Virtual Device Manager

Module 05: Hello World App

2 Hours

- Creating your first project
- The manifest file
- Layout resource
- Running your app on Emulator
- Lab Exercise: Create, Compile and Run 'Hello, Android' App

Module 06: Main Building Blocks

2 Hours

- Activities
- Activity lifecycle
- Intents
- Services
- Content Providers
- Broadcast Receivers
- Lab Exercise: Review Activities, Intents, and Content Providers

Module 06a: Main Building Blocks Demo

2 Hours

Module 07: Basic Android User Interface

- XML versus Java UI
- Dips and Sps
- Views and layouts
- Common UI components
- Handling user events
- Lab Exercise: Create Application with on Click, on Key Down, on Focus Changed Event Handlers

Module 07a: Basic Android User Interface Demo

Module 08: Android System Overview

- File System
- Preferences
- Notifications
- Security model
- Lab Exercise: Create Application with Toast Notifications

Module 09: Advanced Android User Interface - (Part One) 2 Hours

- Selection components
- Adapters
- Complex UI components
- Building UI for performance

Module 10: Advanced Android User Interface - (Part Two)

- Menus and Dialogs
- Graphics
- Animation
- Lab Exercise: Create Application with Android's Advanced User Interface Functions

Module 10a: Advanced Android User Interface Demo 2 Hours

Module 11: Multimedia in Android

- Multimedia Supported audio formats
- Simple media playback
- Supported video formats
- Simple video playback
- Lab Exercise: Create Android Audio/Video Application

Module 11a: Multimedia in Android Demo 3 Hours

Module 12: SQL Database

- Introducing SQLite
- SQLite Open Helper and creating a database
- Opening and closing a database
- Working with cursors Inserts, updates, and deletes
- Lab Exercise: Create Application to Create, Modify and Query an SQLite Database

Module 12a: SQL Database Demo

Module 13: Basic Content Providers

- Content provider MIME types
- Searching for content
- Adding, changing, and removing content
- Working with content files
- Lab Exercise: Create Application that Works with an Android Content Provider
- Module 13a: Basic Content Providers Demo

Module 14: Data Storage, Retrieval and Sharing 2 Hours

- Android Techniques for Saving Data
- Saving Simple Application Data
- Creating and Saving Preferences
- Retrieving Shared Preferences
- Saving Activity State
- Creating a Preferences Page
- Saving and Loading Files
- Lab Exercise: Create application that performs Data Storage and Retrieval from Android External Storage

Module 15: Mapping and Location Based Services

- Using Location Based Services
- Setting up your Emulator with Location Based Services
- Selecting a Location Provider
- Finding Your Location
- Using Proximity Alerts
- Using the Geocoded
- Creating Map Based Activities
- Lab Exercise: Create Location-Aware application that uses Proximity Alerts and Google Maps API

Module 15a: Mapping and Location Based Services Demo

Module 16: Working in the Background

- Introducing Services
- Using Background Worker Threads
- Introducing Notifications
- Using Alarms
- Lab Exercise: Create application with One-Time, Repeating Alarms, and Long-Running Background Task as Service

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MODULE :: 4 (Option 2)

MOBILE APPLICATION DEVELOPMENT (APPLE PROGRAMMING THROUGH OBJECTIVE C)

Total Duration : 3 Month

Introduction

- o iPhone and iPad Device Anatomy
- o iOS Architecture and SDK Frameworks
- o iOS and SDK Version Compatibility
- o Apple iOS Developer Program

☑ Xcode 5

- o Tour of the IDE
- o Templates, Projects, and Workspaces
- o Creating a New Project
- o LLVM and LLDB
- o Debug Gauges
- o Asset Management
- o XCTest Testing Framework
- o Continuous Integration and Bots
- o Automatic Configuration

☑ Objective-C for Experienced Programmers

- o Classes, Objects, and Methods
- o Declared Properties
- o Memory Management
- o Automatic Reference Counting (ARC)
- o Categories and Extensions
- o Formal and Informal Protocols
- o Blocks

☑ Application Patterns and Architecture

- o Model View Controller (MVC)
- o IBOutlets and IBActions
- o Subclassing and Delegation

☑ Views and Windows

- o The View Hierarchy
- o Containers
- o Controls
- o Text and Web Views
- o Navigation View and Tab Bars
- o Alert Views and Action Sheets

- o Controlling Rotation Behavior
- o View Autosizing
- o Autolayout
- ▣ Storyboards
- o Adding Scenes
- o Segues
- o Transitions
- o Using in a Tab Bar Application

- ▣ Table Views
- o Static and Dynamic Table Views
- o Delegates and DataSources
- o Table View Styles
- o Custom Cells

- ▣ Navigation Based Applications
- o Adding the Root View Controller
- o Creating the Navigation Controller
- o Controlling the Stack Navigation Programmatically

- ▣ UIPickerView and UIDatePicker
- o Designing the UI
- o Coding for the Data Picker
- o Hiding the Keyboard
- o Memory Management

- ▣ Directories and Files
- o NSFileManager, NSFileHandle, and NSData
- o Problems Solved by ADO.NET Entity Framework
- o Pathnames in Objective-C
- o Working with Directories
- o Working with Files
- o Reading and Writing from a File
- o iCloud
- o Key-Value Data
- o Archiving

- ▣ Working with Data
- o SQLite Integration
- o Using SQLite Directly
- o Overview of Core Data
- o Managed Objects
- o Persistent Store Coordinator
- o Entity Descriptions

- o Retrieving and Modifying Data

- ▣ Multitouch, Taps, and Gestures

- o The Responder Chain
- o Touch Notification Methods
- o Enabling Multitouch on the View
- o Gesture Motions
- o Gesture Recognizers

- ▣ Drawing

- o Core Graphics and Quartz 2D
- o Lines, Paths, and Shapes

- ▣ Animation

- o Core Animation Blocks
- o Animation Curves
- o Transformations

- ▣ Multitasking

- o Application States
- o Background Execution
- o Background App Refresh in iOS 7
- o State Restoration

- ▣ Notifications

- o Local Notifications
- o Push Notifications

- ▣ Core Location Framework

- o Location Accuracy
- o Obtaining Location Information
- o Calculating Distances
- o MapKit Framework and MKMapView

- ▣ Concurrency

- o Grand Central Dispatch (GCD)
- o Serial and Concurrent Queues
- o Main Dispatch Queue
- o Completion Blocks
- o Operation Queues

- ▣ Networking

- o Reachability



- o Synchronous Downloads
- o Asynchronous Downloads
- o Handling Timeouts
- o Sending HTTP GET and POST Requests
- o Parsing JSON
- o Parsing XML
- o AirDrop

▣ Targeting Multiple Devices

- o iPhone vs. iPad
- o Universal Apps
- o Multiple SDK Support
- o Detecting Device Capabilities
- o Supporting iOS 6 and iOS 7

▣ Localization

- o Resources
- o Language and Region
- o NSLocale
- o Text
- o Dates
- o Numbers

▣ Performance and Power Optimization

- o Measuring Performance
- o Instruments
- o Responsiveness
- o Memory Usage, Spikes, and Leaks
- o Networking and Power

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TERMS & CONDITIONS

WITHDRAWAL FROM THE DIPLOMA

Students are not allowed to withdraw from the Diploma. If a student cannot continue the Diploma his/her fee will be forfeited.

CONDUCT AND DISCIPLINE

A disciplinary action, leading to rustication, will be taken against students whose conduct is found objectionable at any time during the course of study. Reference will be made to 3D Educators code of conduct.

EVALUATION AND GRADING

The performance of students is evaluated through continuous observation of a student's performance in the Diploma – class participation, submission of assignments, quizzes and exercises.

The student will be examined through three hourly exams conducted at the midterm and a final exam at the end of the program. Total marks for passing the Diploma will be 60 out of a total of 100.

Students who do not meet the attendance or any other eligibility criteria will not be allowed to appear in the final examination.

The following grading plan will be applicable for the Diploma:

A	87 - 100
B+	81 -86
B	72 - 80
C+	66 - 71
C	60 - 65
F	below 60

Students who are unable to appear for the final exam are required to submit a written application stating the reason for not appearing for the exam. 3D Educators reserves the right to approve or deny such applications. If approved, the student will be allowed to sit for the exam within one month. Failure to do so, the student will be resubmit the examination fee and sit the future schedule exam. Without passing of the exams no certification will be awarded.

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ONLINE CLASSES FACILITY AVAILABLE

This world is emerging and growing in the 21st Century very rapidly because of latest and remarkable technology and its advancement. The Information become so costly and organizations and individuals need the right information on right time. So, if they are not equipped with the latest and updated technological infrastructure then they may face the severe losses. Therefore, to have the updated knowledge and methodologies, all may require the complete set of instructions with proper guidelines. But, all are impossible without having the consultants/Experts/Trainers/Faculties.

We at 3D EDUCATORS believe and correlate the business processes with the integration of Information Technology and its systems. Now you can also avail this facility at your home.

DISTANCE NOT MATTER

You can join in the live classes Sessions of **3D EDUCATORS – TRAINERS & CONSULTANTS**

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(Get the Admission Form)

[Admission Form](#)

MANAGEMENT

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