



# Web Development Course Structure

## ADVANCED LEVEL

### HTML

- Structure of HTML
- Basic HTML Tags
- Advanced HTML Tags
- Difference between HTML & DHTML
- DHTML Basic tags
- Introduction to Doc Types
- Creating Simple HTML Pages

### Cascading Style Sheets

- Introduction to CSS
- Types of style sheets
- Types of CSS Selectors
- Complete CSS properties
- Converting Table layout to CSS
- Custom CSS Layout Design
- Creating simple and dropdown menus
- Creating Appealing forms using CSS
- CSS Tips and Tricks with Hacks

### Java Script

- Client and Server side scripting
- Introduction to Java Scripting
- Types of Java Scripts
- Variables, operators, loops
- Objects, Events and DOM
- Common java script functions
- Using Java script in Dreamweaver
- Java Script Validations
- Implementing Menus, Galleries etc
- Introduction to Ajax
- Real time Ajax Examples

## JQuery

### Introduction

What You Should Already Know

What is jQuery ?

Adding the jQuery Library to Your Pages

Basic jQuery Example

Downloading jQuery

Alternatives to Downloading

jQuery Syntax

The Document Ready Function

How to use Custom Scripts?

Using Multiple Libraries

jQuery – noConflict() Method

### jQuery – Basics

- String:
- Numbers:
- Boolean:
- Objects:
- Arrays:
- Functions:
- Arguments:
- Scope:
- Built-in Functions:

### jQuery – Selectors

#### How to use Selectors?

- jQuery – CSS Element Selector
- jQuery – CSS Element ID Selector

- jQuery – CSS Element Class Selector
- jQuery – CSS Universal Selector
- jQuery – CSS Multiple Elements E, F, G Selector
- jQuery Callback Functions

### **jQuery – DOM Attributes**

- Get Attribute Value:
- Set Attribute Value:

### **jQuery – DOM Traversing**

- Find Elements by index:
- Filtering out Elements:
- Locating Descendent Elements :
- JQuery DOM Traversing Methods:

### **jQuery – CSS Methods**

- Apply CSS Properties:
- Apply Multiple CSS Properties:
- Setting Element Width & Height:
- JQuery CSS Methods:

### **jQuery – DOM Manipulation Methods**

- Content Manipulation:
- DOM Element Replacement:
- Removing DOM Elements:
- Inserting DOM elements:
- DOM Manipulation Methods:

### **jQuery – Events Handling**

- Binding event handlers:
- Removing event handlers:
- Event Types:
- The Event Object:
- The Event Attributes:

### **jQuery – Effects**

- JQuery Effect Methods:
- jQuery Hide and Show
- jQuery Toggle
- jQuery Slide – slideDown, slideUp, slideToggle
- jQuery Fade – fadeIn, fadeOut, fadeTo

- jQuery Custom Animations

## jQuery – AJAX

- load()
- get()
- post()
- ajax()

## AngularJS

- How Angular.js is opinionated
- Difference between Backbone.js and Angular.js
- Controller Component
- Model Component
- View Component
- Directives
- Filters
- Services
- DI in Angular.js
- Creating Boundaries using ng-app
- Model View Controller
- Templates and Data Binding
- Repeating elements in templates
- Using Expressions, CSS Classes and Styles
- Using Controllers for UI responsibility separation
- Responding to model changes
- Understanding Built-in Directives
- Scope resolution
- One way and Two way data binding
- Filters Overview
- Understanding Filter Expressions
- Building custom Filters
- Services Overview
- Modularity using Services
- Injecting Services
- Directives Overview
- Creating Directives
- The Directive Definition Object
- Compilation and Linking
- Creating Components
- Communicating over \$http
- Configuring the requests
- Sending Http Headers
- Caching Responses
- Request and Response Transformation

- Using RESTful Resources
- Communication over WebSockets
- Testing Models using Jasmine
- Test considerations for Directives and Filters
- Using Angular Mocks
- Techniques for modularizing JavaScript code
- Overview of OSS Angular Modules
- Customizing Angular Modules

## How to Create Website

- Client Requirements/Specifications
- Creating a concept and layout
- Choosing a Color Scheme
- Choosing Stock Photography
- Texture and Typography
- Design a Professional Layout
- Conversation of PSD to CSS
- Implementing JavaScript.

## Web Hosting & FTP

- Web Hosting Basics
- Types of Hosting Packages
- Changing Name Servers
- Linux and Windows CP
- Using FTP Client
- Maintaining a Website

## SEO Concepts

- The importance of SEO
- SEO concepts — how search engines work and how they rank results and effects an Website
- The anatomy of a website and importance of on-site and off-site ranking factors
- Technical SEO concepts, methodology and changes to search ranking
- Linking

## PHP & My SQL

### An Introduction to PHP

- History of PHP
- Versions and Differences between them
- Practicality
- Power
- Installation and configuring Apache and PHP

### PHP Basics

- Default Syntax
- Styles of PHP Tags
- Comments in PHP
- Output functions in PHP
- Datatypes in PHP
- Configuration Settings
- Error Types

### Variables in PHP

- Variable Declarations
- Variable Scope
- PHP's Superglobal Variables
- Variable Variables

### Constants in PHP

- Magic Constants
- Standard Pre-defined Constants
- Core Pre-defined Languages
- User defined Constants

### Control Structures

- Execution Control Statements
- Conditional Statements
- Looping Statements with Realtime Examples

## Functions

- Creating Functions
- Passing Arguments by Value
- Passing Arguments by Reference
- Recursive Functions

## Arrays

- What is an Array?
- How to create an Array
- Traversing Arrays
- Array Functions

## Include Functions

- Include, Include\_once
- Require, Require\_once

## Regular Expressions

- Validating text boxes, emails, phone number, etc
- Creating custom regular expressions

## PHP with MySQL

- What is MySQL
- Integration with MySQL
- MySQL functions
- Gmail Data Grid options
- SQL Injection
- Uploading and downloading images in Database
- Registration and Login forms with validations
- Paging, Sorting, .....

## Strings and Regular Expressions

- Declarations styles of String Variables
- Heredoc style
- String Functions
- Regular Expression Stntax(POSIX)
- PHP's Regular Expression Functions(POSIX Extended)

## Working with the Files and Operating System

- File Functions

- Open, Create and Delete files
- Create Directories and Manipulate them
- Information about Hard Disk
- Directory Functions
- Calculating File, Directory and Disk Sizes

### **Error and Exception Handling**

- Error Logging
- Configuration Directives
- PHP's Exception Class
- Throw New Exception
- Custom Exceptions

### **Date and Time Functions**

### **Authentication**

- HTTP Authentication
- PHP Authentication
- Authentication Methodologies

### **Cookies**

- Why Cookies
- Types of Cookies
- How to Create and Access Cookies

### **Sessions**

- Session Variables
- Creating and Destroying a Session
- Retriving and Setting the Session ID
- Encoding and Decoding Session Data
- Auto-Login
- Recently Viewed Document Index

### **Web Services**

- Why Web Services
- RSS Syntax
- SOAP
- How to Access Web Services

### **XML Integration**



- What is XML
- Create a XML file from PHP with Database records
- Reading Information from XML File

## **MySQL Concepts**

- Introduction
- Storage Engines
- Functions
- Operators
- Constraints
- DDL commands
- DML Commands
- DCL Command
- TCL Commands
- Views
- Joins
- Cursors
- Indexing
- Stored Procedures
- Mysql with PHP Programming
- Mysql with Sqlserver(Optional)

## **Object Oriented Programming System (OOPS)**

- What is Object Oriented Concepts
- Defining classes
- Creating Objects
- Member functions
- Constructor and Destructor
- Inheritance
- Function overriding
- Access Specifiers- private
- public and protected members
- Interfaces, Constants
- Abstract Classes
- Static keyword
- Final keyword
- calling parent constructors
- Annie's Quizzes

## Advance Queries and Data Manipulation using PHP

- LIKE clause
- Sorting
- Joins
- Handling NULL Values
- Regular Expressions
- Transactions
- ALTER Command
- Indexes
- Temporary Tables
- Clone Tables
- Database Information
- Sequences Handling Duplicates
- SQL Injections
- Select
- insert
- update and delete using PHP script
- Annie's Quizzes

## MVC Infrastructure Basics & Introduction to Cake PHP

- Introduction to MVC
- What are Model-View-Controller
- Why use framework in the project (conventional vs. MVC project)
- Installation of CakePHP
- CakePHP folder structure
- File naming conventions
- Important config file (core.php, database.php)
- Annie's Quizzes

## Models and Database Interaction in MVC

- Models: What are models and how they interact with database?
- Accessing and manipulating table data using find save
- update methods of the model
- Joining tables
- conditions
- conditions other than =(LIKE, BETWEEN,)
- order by in modules models
- Change database dynamically using the definitions in database
- php config file
- Annie's Quizzes
- Q & A, Quick Recap.

## Cake PHP Framework

- CAKE PHP Beginning With CakePHP
- What is CakePHP?
- Why Use it?
- Where to Get Help
- Understanding Model-View-Controller Basic
- Principles of CakePHP
- CakePHP Structure
- A Typical CakePHP Request
- CakePHP Folder Structure
- CakePHP Conventions
- Developing with CakePHP
- Requirements Installation Preparation Installation
- Configuration
- Controllers
- Components
- Models
- Behaviors
- Data Sources
- Views
- Helpers
- Scaffolding
- The CakePHP Console
- Plugins
- Global Constants and Functions
- Vendor packages Common
- Tasks With CakePHP
- Data Validation
- Data Sanitization
- Error Handling
- Debugging
- Caching
- Logging
- Testing
- Internationalization & Localization
- Pagination
- REST

## Testing and Implementation

- Various Browser Versions
- Validating the dHTML & CSS , PHP & Mysql
- Common Compatibility Issues