

# Advanced Web Development and Programming

## Course Content

Digital Imaging for Web and Multimedia - Adobe Photoshop CS5 (30 hours)

The objective of this module is to give the students a hands-on introduction to graphic design for the Web using Adobe Photoshop CS5. In this module, the students will learn:

-Basic and advanced photo correction techniques (cropping, resizing, color adjustments, lighting adjustments)

- Basic and advanced layering techniques
- How to enhance digital photographs
- How to prepare graphics for the web
- Creating 3D images and vector drawings
- Working with Adobe Bridge
- Painting and retouching images
- Using Adobe Photoshop filters
- How to use Adobe Photoshop CS5 to create and manipulate digital images

**Students receive one year free domain name and web hosting to host their personal website, portfolio and projects**

## Web Design using HTML, CSS and JavaScript

**(150 hours)**

The emphasis of this module is to teach the students how to build well formatted websites using HTML (structure of website), Cascading Style Sheets (look and format), and JavaScript (dynamic user interaction).

**Students will learn:**

- How to develop cross-browser (works in all browsers: Firefox, Internet Explorer, Chrome, Safari, Opera) websites using XHTML, HTML5 and CSS
- How to add dynamic user interaction using JavaScript libraries (jQuery, Prototype, Lightbox, etc)
- How to validate user input using JavaScript
- How to upload a Website to their web host
- How to configure a web server (Apache, Internet Information Services) for hosting website
- How to optimize a website for Search Engine Ranking (Google, Yahoo, Bing, etc.)
- How to create and maintain their own website

- How to optimize document layout for usability and accessibility
- How to validate HTML and CSS code
- How to work in a team environment with tasks and timelines, deadlines, etc.
- How to use Adobe Dreamweaver CS5 Integrated Development Environment to create websites
- Getting ready for HTML5

### **Building Web Applications using PHP and MySQL**

**(210 hours)**

In this module the students will continue to apply the techniques learned in the previous module (XHTML, CSS, JavaScript) with an emphasis on creating data-driven websites like a Shopping Cart, a Blog, a Content Management System, etc using the PHP web programming language and the MySQL database server.

#### **The students will learn:**

- How to create data-driven dynamic websites using PHP
- Integrating database content to generate dynamic Web pages
- How to configure the Apache Web server for hosting html and PHP websites
- MySQL database server and querying techniques
- How to Work in a team environment to build an Online Shopping Cart Website
- How to create project proposals, project timelines, deadlines, project management skills
- How to use NetBeans Integrated Development Environment to create dynamic websites
- How to use MySQL Administration Tools to manage databases
- Introduction to WordPress blogging tool and publishing platform

### **Database Design and Microsoft SQL Server 2008**

**(120 hours)**

#### **This module is composed of two parts:**

1. Database Design In this module, students will learn the techniques necessary to design and built a good SQL Server database using Entity Modeling and Relational Design techniques. Students will learn how to use the Microsoft Visio 2010 tool to design database models using the Chen and Crow's foot models
2. Querying and Programming a Microsoft SQL Server 2008 database In this module the students will learn how to implement a database from a conceptual model. Student will learn how to query, implement and maintain a database using the SQL (Structured Query Language) language. Students will be using the Microsoft SQL Server Management Studio tool

## **Developing Enterprise Web Solutions with ASP.NET 4**

**(180 hours)**

This course focuses on using the Microsoft Visual Studio® .NET environment and the Microsoft .NET platform to create an ASP.NET Web application that delivers dynamic content to a website.

### **The students will learn:**

- Hands-on approach to building ASP.NET Application for the Web
- How to build dynamic SQL Server data-driven Websites
- How to create customizable Online Shopping Carts, Portals, Blogs, etc.
- How to debug and test ASP.NET web applications
- How to work with ADO.NET Data Sources and Data Controls
- How to create and consume XML Web Services
- How to incorporate AJAX/JQuery technology into ASP.NET applications
- How to validate user input using validation controls
- How to work with Master Pages, skins and themes
- How to authenticate and secure websites
- How to incorporate profiles, personalization, and membership services
- How to configure and deploy website to online hosting services
- How to work in a team environment (with deadlines, deliverables, timelines) to build an SQL Server data-driven Web Application
- How to create project proposals, project timelines, deadlines, project management skills
- How to use the Microsoft Visual Studio 2010 Integrated Development Environment

## **Object-Oriented Programming using Java**

**(390 hours)**

This module is divided up into 2 parts:

### **1. Java Core Programming**

**(240 hours)**

In this module, students will learn to build Desktop Applications for different platforms (Windows, Linux, and Macintosh).

**Students will learn:**

- The Core Java Programming packages
- Object Oriented software design techniques (Classes, Objects, Interfaces)
- How to design a Graphical User Interface
- How to create data-driven software
- How to use the NetBeans Integrated Development Environment for building desktop applications

### **2. Java Servlets and JSP Web Programming**

**(150 hours)**

In this module, students will continue applying their knowledge from the Java Core module with an emphasis on building applications for the web.

Students will learn:

- How to build a data-driven web application using Java Server Pages and Java Servlets
- How to build a Model-View-Controller application
- How to configure Apache Tomcat Web server
- How to package and deploy web applications to web server
- How to create project proposals, project timelines, deadlines, project management skills
- How to use the NetBeans Integrated Development Environment for building websites
- Introduction to the Spring MVC Framework

Tuition/Costs Tuition	<b>\$9,787.00</b>
1% fee	<b>\$97.87</b>
Books	<b>\$1,442.00</b>
Student fee	<b>\$95.00</b>
Mandatory fees	
Computeraccess	
Total	<b>\$11,421.87</b>