## Level 6 Advanced Diploma in Web Development (902)
## 153 Credits

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| **Unit:** Advanced HTML | **Guided Learning Hours:** 200 |
| **Exam Paper No.:** 1 | **Number of Credits:** 20 |
| **Prerequisites:** Familiarity with the Web and its terminology. | **Corequisites:** A pass or higher in Diploma in e-Commerce & Web Design or equivalence. |
| **Aim:** This unit builds on the skills gained in HTML Authoring and covers building advanced and complex sites using XHTML (the next generation of HTML), CSS (Cascading Style Sheets), and adding simple JavaScript functionality. Frames, event handlers, multimedia (sound, video & animation), detailed FTP and directory structure overview, and other design processes will also be introduced. Learners should expect to fully build a preliminary site by the time of completing this unit. | |
| **Required Materials:** Recommended Learning Resources. | **Supplementary Materials:** Recommended textbooks and lecture notes. |
| **Special Requirements:** This is a hands-on unit, hence practical use of computers is essential. Requires intensive lab work outside of class time. | |

| Intended Learning Outcomes: | Assessment Criteria: |
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| 1 Using the Dynamic HTML Object Model and scripting to create dynamic Web pages. | 1.1 Define HTML Object Referencing<br>1.2 Describe methods, events, collections, and data types<br>1.3 Describe dynamic styles and dynamic positions<br>1.4 Define how to use frame collections<br>1.5 Explain navigator object<br>1.6 Describe how to use the frames collection to access objects in a separate frame on your Web page.<br>1.7 Define how to use the navigator object to determine which browser is being used to access your page.<br>1.8 Describe the Dynamic HTML object hierarchy |
| 2 Examining the notion of events, event handlers and event bubbling, and being able to create event handlers that respond to mouse and keyboard events. | 2.1 Describe the **onclick** event<br>2.2 Illustrate the **onload** event<br>2.3 Define error handling with **onerror**<br>2.4 Illustrate how to track the mouse with **onmousemove** event<br>2.5 Define rollovers with **onmouseover** and **onmouseout**<br>2.6 Define form processing with **onfocus** and **onblur**<br>2.7 Define form process with **onsubmit** and **onreset**<br>2.8 Define event bubbling<br>2.9 Demonstrate how to use the event object and, ultimately, responding to user actions |
| 3 Using filters to achieve special effects, demonstrating how to create animated visual transitions between Web pages and modifying filters dynamically, using DHTML. | 3.1 Define flip filters<br>3.2 Examine transparency with the chroma filter<br>3.3 Describe the process of creating image masks<br>3.4 Describe how to add shadows to Text<br>3.5 Describe how to create gradients with alpha<br>3.6 Describe how to make text glow and creating motion with blur |

| 4 Dynamic HTML's notion of data binding and binding data to XHTML elements deprecated tags and attributes. | 4.1 Describe how to filter data to select only records appropriate for a particular application.<br>4.2 Identify how to navigate backward and forward through a database with the Move methods.<br>4.3 Describe simple data binding<br>4.4 Describe how to move within a Recordset<br>4.5 Describe how to bind to an image or table<br>4.6 Define how to sort data |
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| 5 CSS, their syntax, properties, using in formatting Web pages and controlling content location in pages, styles cascade, and how they inherit from each other. | 5.1 Describe CSS syntax<br>5.2 Demonstrate linking CSS and XHTML<br>5.3 Describe inheritance and cascading order<br>5.4 Describe box model<br>5.5 Define font and text properties<br>5.6 Define content positioning |
| 6 System Development Life Cycle concepts and links to Web Development. | 6.1 Evaluate skills for web development projects<br>6.2 Explain system life cycle<br>6.3 Apply web development process to system development cycle<br>6.4 Analyse web hosting and development methodologies<br>6.5 Explain web hosting issues |
| 7 XHTML implementation, sound, video and interactivity applications and technologies. | 7.1 Analyse different helper applications and plug-ins<br>7.2 Add sound on web page<br>7.3 Add video on web page<br>7.4 Add downloadable apps on web page<br>7.5 Add animation on web page |
| 8 How to create a reliable and secure shopping cart solution for your ecommerce website. | 8.1 Describe event handlers<br>8.2 Be able to assign event handler to an object<br>8.3 Demonstrate cancelling event actions<br>8.4 Be able to capture an event<br>8.5 Describe event object properties |
| 9 Understand Asynchronous JavaScript and XML (AJAX) client side web development technology techniques. | 9.1 Explain web standards<br>9.2 Be able to create Ajax applications<br>9.3 Define XML Http Request Object<br>9.4 Define XML Http Ready Property<br>9.5 Be able to create a server-side3 script |
| 10 Understand eCommerce processes, concepts and applications. | 10.1 Describe eCommerce<br>10.2 Describe eCommerce business models<br>10.3 Describe eCommerce security and encryption<br>10.4 Describe eCommerce issues<br>10.5 Describe Electronic Data Interchange (EDI) |

**Methods of Evaluation:** A 3-hour essay written paper with 5 questions, each carrying 20 marks. Candidates are required to answer all questions. Candidates also undertake coursework/project in Advanced HTML with a weighting of 100%.

## Recommended Learning Resources: Advanced HTML

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| **Text Books** | • Learn Advanced HTML With DHTML by Jose A. Ramalho.  ISBN-10: 1556225865<br>• The Essential Guide to CSS and HTML Web Design by Craig Grannell.  ISBN-10: 1590599071<br>• The Advanced Html Companion by Keith Schengili-Roberts and Kim Silk-Copeland.  ISBN-10: 0126235422 |
| **Study Manuals** | BCE produced study packs |
| **CD ROM** | Power-point slides |
| **Software** | Web Browser Software |