Business & Computing Examinations (BCE)
LONDON (UK)

Web Design Programme Analysis

The development of BCE programmes include extensive market research from the following sources:

- Data from BCE Centre Annual Reports.
- Enquiries received from different stakeholders.
- Email survey from statutory consultees and stakeholder bodies.
- Questionnaire survey from BCE learners.
- Input received during Approved Centres and Corporate companies training seminar.
- BCE discussions and feedback from potential employers.

BCE learners are 18+, classified as follows:

- Holders of General Certificate of Secondary Education (GCSE) intending to obtain a programme for employment or further education.
- Those already in employment furthering their knowledge for promotion or to venture into new fields.
- Corporate Companies approaching BCE directly or Approved Centres for in-house training.
- Those looking for career change.
- Mature adults with no formal programmes.

Guided Learning Hours is the entire notional learning hours representing estimate of total amount of time reasonably required for learners to achieve necessary level of attainment for the award of a programme.

Activities that contribute to guided learning hours include:

- Guided Learning
- Independent and unsupervised research/learning
- Unsupervised compilation of a portfolio of work experience
- Unsupervised e-learning
- Unsupervised e-assessment
- Unsupervised coursework
- Watching a pre-recorded podcast or webinar
- Unsupervised work-based learning

Activities that contribute to Guided Learning include:

- Classroom-based learning supervised by a Tutor
- Work-based learning supervised by a Tutor
- Live webinar or telephone tutorial with a Tutor in real time
- E-learning supervised by a Tutor in real time
- Forms of assessment

Level 5 Diploma in eCommerce & Web Design (123 Credits)

Web design is modern art. Web designers are involved with a variety of graphics and web development projects as the need for Internet web pages and technology skills is growing rapidly. Web designers may be involved with managing multimedia files, creating dynamic content, coding HTML, and implementing attractive website layouts and designs.

Why does the programme exists – The aim of the programme is to introduce web technology to learners. Apart from analysing web development using Dreamweaver and other web programs, accessing the internet has its disadvantages. The programme highlights important security aspects.

How it fits into the larger programme – Internet and Web are inter-twined. Everything today is based on Internet, hence the programme gives knowledge on today's technology.

For whom it was designed – This programme is designed for those who complete the Level 4 Certificate in Networking, Level 4 Certificate in Computer Fundamentals, Level 5 Diploma in Information Technology or holders of equivalent programmes interested in pursuing web technology.

How it will benefit learners – The Web design programme can better prepare learners for employment in the highly competitive technology industry. Web designers can also choose to start their own business to bid on contracts for various projects. The development of new technologies and tools is making a career in web design a rapidly growing employment option.

Units:

- eBusiness Fundamentals
- HTML
- XML
- JavaScript
- DreamWeaver
- Flash

eBusiness Fundamentals - Electronic Business/Commerce or ebusiness/ecommerce is a term for any type of business, or commercial transaction, that involves the transfer of information across the Internet. It covers a range of different types of businesses, from consumer based retail sites, through auction or music sites, to businesses exchanging trading goods and services between corporations. It is currently one of the most important aspects of the Internet to emerge. Common illustrations include Amazon.com, ebay.com, and hotels.com.

HTML - HyperText Markup Language (HTML) is a language to specify the structure of documents for retrieval across the Internet using browser programs of the World Wide Web.

XML - XML was designed to transport and store data. HTML was designed to display data. XML carries and stores data.

JavaScript - JavaScript is a scripting language used in many webpages. JavaScript is a client side language and it runs on the client browser. JavaScript is a simple programming language used to make web pages more interactive. Once known as LiveScript, JavaScript's name was changed as part of a marketing deal between Netscape and Sun. JavaScript code was invented to validate form fields before a form is submitted, saving the user the trouble of waiting to hear back from the web server if the problem is a simple one, like a missing digit in a 16-digit credit card number.

DreamWeaver - Dreamweaver is a web page editor, designed to allow users to create web pages with a wide variety of features without having to write the HTML code by hand. Dreamweaver is one of the most powerful applications for building and managing webpages. With Dreamweaver one can create tables, forms, CSS styles and templates.

Flash - Flash allow web developers to create interactive content, such as animations, animated menus, movies, games and more. Flash is based on vector graphics, which means that flash animations can be rescaled without losing the image quality. Flash animations can be embedded in HTML pages as menus, movies or web site layouts.

Unit	Pre-requisite	Core-requisite	Guided Learning Hours	Number of Credits
eBusiness Fundamentals	Some level of familiarity with computer and Internet technologies.	A pass or higher in Diploma in Information Technology or equivalence.	220	22
HTML Authoring	Basic understanding of HTML. Familiarity with the Web and its terminology	A pass or higher in Diploma in Information Technology or equivalence.	200	20
XML	Basic understanding of	A pass or higher in Diploma in	240	24

	HTML. Familiarity with the Web and its terminology	Information Technology or equivalence.		
JavaScript	Basic understanding of HTML. Familiarity with the Web and its terminology	A pass or higher in Diploma in Information Technology or equivalence.	240	24
DreamWeaver	Basic understanding of HTML. Familiarity with the Web and its terminology	A pass or higher in Diploma in Information Technology or equivalence.	240	24
Flash	Familiarity with the Web and its terminology.	A pass or higher in Diploma in Information Technology or equivalence.	220	22
Coursework (Project) for all units			190	19

Rules of combination:	All units are mandatory
Age Group:	18+
Programme Type:	Vendor/Industry

eBusiness Learning Hours Information Sheet

Unit Titles		Credits	Notional Learning Hours					
			Guided / Contact Learning	Independent Learning	Research Activities / Group Work	Assessment (self/class)	Coursework	Total
01	Internet and World Wide Web	2.0	8	6	2	2	2	20
02	eBusiness models	2.0	8	6	2	2	2	20
03	Building, designing and management eBusiness	2.0	8	6	2	2	2	20
04	Electronic transfer and other online payment schemes	2.0	8	6	2	2	2	20
05	How the Internet works	2.0	8	6	2	2	2	20
06	Wireless technology	2.0	8	6	2	2	2	20
07	Internet security and security protocols	2.0	8	6	2	2	2	20
08	Online marketing and search engines	2.0	8	6	2	2	2	20
09	Cookies and web tracking	2.0	8	6	2	2	2	20
10	Internet legal and ethical issues	2.0	8	6	2	2	2	20
11	Online banking services	2.0	8	6	2	2	2	20
		22.0	**88**					**220**

HTML Authoring Learning Hours Information Sheet

Unit Titles		Credits	Notional Learning Hours					
			Guided / Contact Learning	Independent Learning	Research Activities / Group Work	Assessment (self/class)	Coursework	Total
01	Principles of a HTML pages	2.0	8	6	2	2	2	20
02	Creating HTML hyperlinks	2.0	8	6	2	2	2	20
03	HTML fonts, colours and images	2.0	8	6	2	2	2	20
04	Linked lists	2.0	8	6	2	2	2	20
05	Graphics and images	2.0	8	6	2	2	2	20
06	HTML Links	2.0	8	6	2	2	2	20
07	Creating tables in HTML	2.0	8	6	2	2	2	20
08	Using frames in HTML	2.0	8	6	2	2	2	20
09	Creating forms in HTML	2.0	8	6	2	2	2	20
10	Creating inline and embedded styles using CSS	2.0	8	6	2	2	2	20
		20.0	**80**					**200**

XML Learning Hours Information Sheet

Unit Titles		Credits	Notional Learning Hours					
			Guided / Contact Learning	Independent Learning	Research Activities / Group Work	Assessment (self/class)	Coursework	Total
01	XML document features XML Syntax	2.0	8	3	2	2	2	20
02	XML Syntax	2.0	8	3	2	2	2	20
03	Components of an XML document	2.0	8	3	2	2	2	20
04	How XML Works	2.0	8	3	2	2	2	20
05	Validating data in XML	2.0	8	6	2	2	2	20
06	Working with namespaces and schemas	2.0	8	6	2	2	2	20
07	Cascading style sheets in XML	2.0	8	3	2	2	2	20
08	Working with XSLT	2.0	8	6	2	2	2	20
09	Using extension functions and elements	2.0	8	3	2	2	2	20
10	Creating element groups	2.0	8	6	2	2	2	20
11	Overview of Hyperlinks	2.0	8	6	2	2	2	20
12	Using the document object model	2.0	8	6	2	2	2	20
		24.0	**96**					**240**

JavaScript Learning Hours Information Sheet

Unit Titles		Credits	Notional Learning Hours					
			Guided / Contact Learning	Independent Learning	Research Activities / Group Work	Assessment (self/class)	Coursework	Total
01	JavaScript concepts	2.0	8	3	2	2	2	20
02	Simple Program	2.0	8	3	2	2	2	20
03	Arithmetic	2.0	8	3	2	2	2	20
04	If and If...Else selection statements	2.0	8	3	2	2	2	20
05	For and Do...While repetition statements	2.0	8	6	2	2	2	20
06	Using functions in Javascript	2.0	8	6	2	2	2	20
07	Frames	2.0	8	3	2	2	2	20
08	Forms	2.0	8	6	2	2	2	20
09	Javascript events	2.0	8	3	2	2	2	20
10	Creating and initialising arrays	2.0	8	6	2	2	2	20
11	Object-based programming using math	2.0	8	6	2	2	2	20
12	Cascading Style Sheets (CSS)	2.0	8	6	2	2	2	20
		24.0	**96**					**240**

Dreamweaver Learning Hours Information Sheet

Unit Titles		Credits	Notional Learning Hours					
			Guided / Contact Learning	Independent Learning	Research Activities / Group Work	Assessment (self/class)	Coursework	Total
01	Overview of the Dreamweaver workspace	2.0	8	3	2	2	2	20
02	Working with the document window objects and palette	2.0	8	3	2	2	2	20
03	Manipulating images in Dreamweaver	2.0	8	3	2	2	2	20
04	Implementing effects	2.0	8	3	2	2	2	20
05	Creating tables in Dreamweaver	2.0	8	6	2	2	2	20
06	Creating forms in Dreamweaver	2.0	8	6	2	2	2	20
07	Using Dreamweaver's Javascript debugger	2.0	8	3	2	2	2	20
08	Creating and designing CSS	2.0	8	6	2	2	2	20
09	Creating templates in Dreamweaver	2.0	8	3	2	2	2	20
10	Using layers in Dreamweaver	2.0	8	6	2	2	2	20
11	Analysing events and actions in Dreamweaver	2.0	8	6	2	2	2	20
12	Implementing site management tools	2.0	8	6	2	2	2	20
		24.0	**96**					**240**

Flash Learning Hours Information Sheet

Unit Titles		Credits	Notional Learning Hours					
			Guided / Contact Learning	Independent Learning	Research Activities / Group Work	Assessment (self/class)	Coursework	Total
01	The flash interface	2.0	8	6	2	2	2	20
02	Flash Movie Development	2.0	8	6	2	2	2	20
03	Animating a flash page	2.0	8	6	2	2	2	20
04	Editing Button Symbols	2.0	8	6	2	2	2	20
05	Embedding a Flash Movie in a Web Page	2.0	8	6	2	2	2	20
06	Creating an Advertisement Banner	2.0	8	6	2	2	2	20
07	Making a flash page interactive	2.0	8	6	2	2	2	20
08	Publishing a flash page	2.0	8	6	2	2	2	20
09	Creating menus in flash	2.0	8	6	2	2	2	20
10	Advanced flash animation	2.0	8	6	2	2	2	20
11	Advanced animated buttons and transitions	2.0	8	6	2	2	2	20
		22.0	**88**					**220**

Level 6 Advanced Diploma in Web Development (124 Credits)

The Level 5 Diploma in eCommerce & Web Design looks mainly at client-side (front-end) programming. The Level 6 Diploma in Advanced Web Development looks at backend (server side) programming.

Why does the programme exists – The programme provides advanced learning on most sought out web programs. Every application on the web is stored on a server. Knowledge on programming server applications on how to store, access and delete this information cannot be over emphasised.

How it fits into the larger programme – Because of the dynamic feature of the internet today, there is a huge need for updating online server information.

For whom it was designed – This programme is designed for those who complete the Diploma in eCommerce & Web Design.

How it will benefit learners – Learners will benefit greatly by having the most sought out Web Server Development skills.

Units:

- Advanced HTML
- Advanced JavaScript
- Web Server Configuration
- ASP .Net
- PhP

Advanced HTML – HTML in the Diploma level looks at static pages. It is true we now use the internet for latest news, flight information, bank transactions etc. Advanced HTML looks at creating dynamic web pages.

Advanced JavaScript – though JavaScript is a script language, a lot of learners still find the concept of programming a bit difficult. Advanced JavaScript looks at functions, methods and events required for skillful server side programming

Web Server Configuration – a web server controls incoming and outgoing traffic. Good Web Configuration saves bandwidth and enables fast web surfing.

Active Server Pages (ASP) .NET - is a programming framework used to create enterprise Web Applications. ASP is also a backend application. These applications are accessible on a global basis leading to efficient information managment. ASP.NET code is a compiled code instead of interpreted code (ASP).

PhP - stands for "Hypertext Preprocessor". It is a server-side, HTML embedded scripting language used to create dynamic Web pages. Much of its syntax is borrowed from C, Java and Perl with some unique features thrown in. The goal of the language is to allow Web developers to write dynamically generated pages quickly. When a visitor opens the page, the server processes the PhP commands and then sends the results to the visitor's browser, just as with ASP or ColdFusion. Unlike ASP or ColdFusion, however, PHP is Open Source and cross-platform.

Unit	Pre-requisite	Core-requisite	Guided Learning Hours	Number of Credits
Advanced HTML	Familiarity with the Web and its terminology.	A Pass or better in Diploma in eCommerce & Web Design or equivalence.	200	20
Advanced JavaScript	Familiarity with the Web and its terminology.	A Pass or better in Diploma in eCommerce & Web Design or equivalence.	260	26
Web Server Configuration	Familiarity with the Web and its terminology.	A Pass or better in Diploma in eCommerce & Web Design or equivalence.	260	26
ASP .Net	A solid background in HTML. Knowledge in SQL is an advantage.	A Pass or better in Diploma in eCommerce & Web Design or equivalence.	260	26
PhP	Familiarity with the Web and its terminology.	A Pass or better in Diploma in eCommerce & Web Design or equivalence.	240	24
Coursework (Project) for all units			310	31

Rules of combination:	All units are mandatory
Age Group:	19+
Programme Type:	Vendor/Industry

Advanced HTML Learning Hours Information Sheet

Unit Titles		Credits	Notional Learning Hours					
			Guided / Contact Learning	Independent Learning	Research Activities / Group Work	Assessment (self/class)	Coursework	Total
01	Dynamic HTML object hierarchy	2.0	8	6	2	2	2	20
02	Events and event handlers	2.0	8	6	2	2	2	20
03	Using filters to achieve special effects	2.0	8	6	2	2	2	20
04	Data binding in HTML	2.0	8	6	2	2	2	20
05	Cascading Style Sheets (CSS) syntax and properties	2.0	8	6	2	2	2	20
06	Web development life cycle	2.0	8	6	2	2	2	20
07	XHTML implementation	2.0	8	6	2	2	2	20
08	Shopping cart implementation	2.0	8	6	2	2	2	20
09	Asynchronous JavaScript and XML (AJAX)	2.0	8	6	2	2	2	20
10	eCommerce business models	2.0	8	6	2	2	2	20
		20.0	80					**200**

Advanced JavaScript Learning Hours Information Sheet

Unit Titles		Credits	Notional Learning Hours					
			Guided / Contact Learning	Independent Learning	Research Activities / Group Work	Assessment (self/class)	Coursework	Total
01	CGI Programs	2.0	8	3	2	2	2	20
02	JavaScript and Java	2.0	8	3	2	2	2	20
03	Calling a Function	2.0	8	3	2	2	2	20
04	Nested Statements	2.0	8	3	2	2	2	20
05	Operator Categories	2.0	8	6	2	2	2	20
06	Loop Statements	2.0	8	6	2	2	2	20
07	Passing arguments into functions	2.0	8	3	2	2	2	20
08	Event handlers in JavaScript	2.0	8	6	2	2	2	20
09	JavaScript DOM objects	2.0	8	3	2	2	2	20
10	JavaScript Windows object properties	2.0	8	6	2	2	2	20
11	JavaScript math and date methods	2.0	8	6	2	2	2	20
12	JavaScript form object	2.0	8	6	2	2	2	20
13	Dynamic HTML (DHTML) document object model	2.0	8	6	2	2	2	20
		26.0	**104**					**260**

Web Server Configuration Learning Hours Information Sheet

Unit Titles		Credits	Notional Learning Hours					
			Guided / Contact Learning	Independent Learning	Research Activities / Group Work	Assessment (self/class)	Coursework	Total
01	Configuring HTTP server	2.0	8	3	2	2	2	20
02	Web server functions	2.0	8	3	2	2	2	20
03	Application Service Provider	2.0	8	3	2	2	2	20
04	How e-mail servers deliver messages	2.0	8	3	2	2	2	20
05	File sharing systems	2.0	8	6	2	2	2	20
06	Internet cookies	2.0	8	6	2	2	2	20
07	Network Address Translation (NAT	2.0	8	3	2	2	2	20
08	Virtual Private Networks (VPN)	2.0	8	6	2	2	2	20
09	Common Gateway Interface mechanism	2.0	8	3	2	2	2	20
10	Web crawling techniques	2.0	8	6	2	2	2	20
11	Web affiliate marketing software	2.0	8	6	2	2	2	20
12	Building effective websites	2.0	8	6	2	2	2	20
13	Web hosting features	2.0	8	6	2	2	2	20
		26.0	**104**					**260**

ASP .Net Learning Hours Information Sheet

Unit Titles		Credits	Notional Learning Hours					
			Guided / Contact Learning	Independent Learning	Research Activities / Group Work	Assessment (self/class)	Coursework	Total
01	Server-side technologies and ASP .Net tags	2.0	8	3	2	2	2	20
02	ASP File System Objects	2.0	8	3	2	2	2	20
03	IF…THEN/FOR…NEXT construct statements	2.0	8	3	2	2	2	20
04	ASP .Net database connection	2.0	8	3	2	2	2	20
05	Array implementation	2.0	8	6	2	2	2	20
06	Using ASP to create, edit or delete database records	2.0	8	6	2	2	2	20
07	Creating a shopping cart	2.0	8	3	2	2	2	20
08	Generating auto emails	2.0	8	6	2	2	2	20
09	ASP and JavaScript	2.0	8	3	2	2	2	20
10	Perl and Common Gateway Interface	2.0	8	6	2	2	2	20
11	Dynamic HTML	2.0	8	6	2	2	2	20
12	How to Use the Validation Controls	2.0	8	6	2	2	2	20
13	SQL Data Sources	2.0	8	6	2	2	2	20
		26.0	**104**					**260**

PhP Learning Hours Information Sheet

Unit Titles		Credits	Notional Learning Hours					
			Guided / Contact Learning	Independent Learning	Research Activities / Group Work	Assessment (self/class)	Coursework	Total
01	Installing PhP	2.0	8	6	2	2	2	20
02	PhP basics	2.0	8	6	2	2	2	20
03	Server-side scripting framework	2.0	8	6	2	2	2	20
04	Creating dynamic web pages using PhP	2.0	8	6	2	2	2	20
05	User interaction using forms and cookies	2.0	8	6	2	2	2	20
06	Files, strings and mail functions	2.0	8	6	2	2	2	20
07	PhP programming	2.0	8	6	2	2	2	20
08	Creating PhP templates	2.0	8	6	2	2	2	20
09	Building a database driven web site using PhP	2.0	8	6	2	2	2	20
10	Instantiating objects in PhP	2.0	8	6	2	2	2	20
11	User Interaction	2.0	8	6	2	2	2	20
12	Files, Strings and Mail	2.0	8	6	2	2	2	20
		24.0	**86**					**240**