






Diploma in eCommerce & Web Design (901) - XML

Prerequisites: Basic knowledge of computers and file management.	Corequisites: A pass or higher in Diploma in Information Technology or equivalence
Aim: Programming systems these days are using many different technologies and programming languages. XML is a modern effort employed to allow communication between all these different systems. The course introduces extensible Markup Language (XML) and covers the advantages of XML over HTML, the process of switching from HTML to XML specification process and production rules, including the most important XML concepts: well-formed and valid XML, DTD, Namespaces, XML DTDs, XSL tools and resources, XSL style sheets, and the future of XML.	
Required Materials: Recommended Learning Resources.	Supplementary Materials: Lecture notes and tutor extra reading recommendations.
Special Requirements: This is a hands-on course, hence use of computers is mandatory.	
Intended Learning Outcomes:	Assessment Criteria:
1 Describe XML and its use. Define the history and XML goals	1.1 Define XML 1.2 Describe the use of XML 1.3 Describe how to construct an XML document 1.4 Describe the advantages of XML 1.5 Define the differences between XML and HTML
2 Define XML documents. Create a simple XML page	2.1 Describe the components of an XML document 2.2 Describe XML elements 2.3 Describe XML attributes 2.4 Describe the structure and syntax of XML
3 Define XML Document Type Definition (DTD)	3.1 Describe DTDs 3.2 Describe DTD entities 3.3 Analyse DTD declarations 3.4 Define XML character notations 3.5 Define internal and extern DTDs
4 Define XML Schema. Analyse how to declare namespaces	4.1 Describe XML namespaces 4.2 Define simple-type elements 4.3 Define attribute names for namespace declaration 4.4 Describe how to apply namespace to elements and attributes 4.5 Describe namespace constraints
5 Demonstrate working with cascading style sheets	5.1 Learn about the history and theory of Cascading Style Sheets 5.2 Demonstrate linking a style sheet to an XML document 5.3 Design a page layout using styles
6. Demonstrate working with XSLT.	6.1 Learn about the history and theory of XSL 6.2 Demonstrate how to create an XSLT style sheet

7 Describe creating computational stylesheets	6.3	Demonstrate the syntax of the XPath language
	6.4	Be able to transform an XML document into an HTML file
	6.5	Demonstrate creating templates to format sections of the XML document
8. Analyse creating element groups.	7.1	Define how to number nodes
	7.2	Apply XPath functions such as count() and sum()
	7.3	Create formulas using mathematical operators
	7.4	Work with text nodes and white space
	7.5	Create variables and parameters
9. Describe the document object model	8.1	Describe working with step patterns to create complex node sets
	8.2	Identify how to create model templates so that different code can be applied to the same nodes
	8.3	Demonstrate accessing node sets using ID attributes and keys
	8.4	Demonstrate organising elements using Muenchian grouping
	8.5	Demonstrate accessing secondary source documents
	9.1	Learn about document object models
	9.2	Demonstrate how to create and load a document object
	9.3	Describe how to apply an XSLT transformation to a document
	9.4	Describe how to use JavaScript to modify the contents of an XML document
	9.5	Describe how to use a form to e-mail the contents of an XML document
9.6	Demonstrate using JavaScript to modify the attribute values of a document element	
9.7	Illustrate using JavaScript to pass a value to a style sheet parameter	

Recommended Learning Resources: XML

Text Books	<ul style="list-style-type: none"> Beginning XML, 4th Edition (Programmer to Programmer). ISBN-10: 0470114878 New Perspectives on XML, Second Edition, Comprehensive (New Perspectives) (Paperback) by Patrick Carey. ISBN-10: 1418860646 XML for the World Wide Web (Visual QuickStart Guide) by Elizabeth Castro. ISBN-10: 0201710986
Study Manuals 	BCE produced study packs
CD ROM 	Power-point slides
Software 	Internet Explorer and XML

Tel: 0044 7423211037

Email: info@londoncomputercollege.co.uk Website: www.londoncomputercollege.co.uk

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