Catalog Course Description:

XML Document Design teaches you how to create intelligent structured web documents using the Extensible Markup Language (XML). You will study the functions and relationships between XML and other members of the XML family of technologies, including the Extensible Hypertext Markup Language (XHTML) and Extensible Stylesheet Language (XSL). You will create and apply styling to XML documents in a series of hands-on labs that focus on the development of coding conventions and compliance with the rules for well-formed XML. This course provides a balance of training in theory, technology and hands-on development. The skills and concepts taught in this course enable corporations to create persistent structured documents that can be published to a variety of output formats and media. This course covers XML Document Design as well as the basics of CSS, DHTML and XHTML.

Entry Level Standards:

Students taking this course should be proficient in Windows 98, 2000, or XP

Prerequisites:

WEB 2001 and 2002 and 2003; or CSIT 2645 or equivalent

Textbook(s) and Other Course Materials:

Textbook(s) and other Reference Material Basic to the Course:


Supplementary Materials:

System Requirements: You will need a basic text editor, the current version of the Internet Explorer (IE 6 or higher), Netscape, Firefox, or Safari Web browsers, and an XML validator. This book assumes that you will be using the Home Edition of XMLSpy to validate your XML documents, but you may use another application. Note that XMLSpy requires the Windows operating system.

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction to XML</td>
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<tr>
<td>2</td>
<td>Creating XML Document</td>
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</tbody>
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II. Course Objectives*:

A. Understand and be able to define XML, CSS, XHTML and DHTML.  I,II,III

B. Use key Internet technologies, such as DHTML and CSS.  II,III,VI

C. Configure software for XML debugging including Xerces parser, Instant Saxon processor, XML Spy 5.0 and others.  II,III,IV,VI

D. Learn to use/study the basics of XML and Extensible Hypertext Markup Language (XHTML).  I,II,III

E. Learn to use/study the basics of Cascading Style Sheets (CSS) and Dynamic HTML (DHTML).  I,II,III

*Roman numerals after course objectives reference goals of the Web Technology program.

III. Instructional Processes*:

Students will:

1. Use technology to teach Web page creation and other aspects of Web authoring.  
   *Technological literacy outcome*

2. Use web research to investigate areas of interest in building web sites.  
   *Technological literacy outcome*

3. Use interactive learning through writing, listening, and speaking in the collaborative activities.  
   *Communication outcome*
4. Use research activities to promote independent thinking. *Active Learning Strategies*

5. Use software tools and web development skills to develop web sites that are attractive, functional, and efficient. *Technological literacy outcome*

6. Use key Internet technologies such as DHTML and CSS. *Technological literacy outcome*

*Strategies and outcomes listed after instructional processes reference TBR's goals for strengthening general education knowledge and skills, connecting course work to experiences beyond the classroom, and encouraging students to take active and responsible roles in the educational process.

**IV. Expectations for Student Performance**: 

Upon successful completion of this course, the student should be able to:

1. Identify the basic concepts of markup languages. (A)
2. List the goals of XML. (A)
3. Define XHTML. (A)
4. Construct XML documents. (D)
5. Identify the differences between tags and elements in XML. (E)
6. Create a well-formed XML document. (E)
7. Define the Document Type Definitions (DTD). (A)
8. Create a DTD. (D)
9. Validate an XML document. (D)
10. Identify the requirements for a parser. (A)
11. Use online parsers. (C)
12. Use command-line parsers. (C)
13. Define XML namespaces and usage. (A)
14. Describe the relationship between XSL and XSLT. (A)
15. Define XML formatting requirements. (A)
16. Apply CSS to XML. (B)
17. Identify the reasons for XHTML's development. (A)
18. Use XML tools to clean existing documents. (C)

*Letters after performance expectations reference the course objectives listed above.

**V. Evaluation**: 

A. Testing Procedures:
Online quizzes will be built into the course. The primary portion of the student's grade will be based on the projects completed and quizzes taken. The purpose of the online quizzes is to encourage the student to work through the exercises and to become familiar with the textbook chapters. The quiz items and settings will be very similar to those taken for the actual CIW Web Developer exam.

Exams: 50 percent of grade. Students will be given a series of quizzes and exams over textbook content during the semester. These exams will consist of true/false, multiple choice, and essay questions.

B. Laboratory Expectations:

Projects: 30 percent of grade. Students will be given several lab projects. The projects will be completed in the course of reading and working through the textbook. The files will be sent weekly via the method designated by the instructor.

C. Field Work:

N/A

D. Other Evaluation Methods:

Online Communication Tools: 20 percent of grade. Students will use the discussion group facility and email to communicate with instructor and with each other.

E. Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
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<tbody>
<tr>
<td>A</td>
<td>90-100</td>
</tr>
<tr>
<td>B+</td>
<td>86-89</td>
</tr>
<tr>
<td>B</td>
<td>80-85</td>
</tr>
<tr>
<td>C+</td>
<td>76-79</td>
</tr>
<tr>
<td>C</td>
<td>70-75</td>
</tr>
<tr>
<td>D+</td>
<td>66-69</td>
</tr>
<tr>
<td>D</td>
<td>60-65</td>
</tr>
<tr>
<td>F</td>
<td>0-59</td>
</tr>
</tbody>
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VI. Policies:

A. Attendance Policy:

Pellissippi State Technical Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding videotape and Web courses) must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. (Pellissippi State Catalog)

B. Academic Dishonesty:

You are expected to submit only work that you do yourself. Do not collaborate on work with other students unless you are given a group project. Failure to observe these rules could result in you receiving a failing grade or being dismissed from the class with a grade of F. Plagiarism, cheating and other forms of academic misconduct are prohibited. A student guilty of academic
misconduct, either directly or indirectly through participation or assistance, is immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions that may be imposed through the regular Pellissippi State procedures as a result of academic misconduct, the instructor has the authority to assign an F or a zero for the exercise or examination or to assign an F in the course. (Pellissippi State Catalog)

C. Accommodations for disabilities:

If you need accommodations because of a disability, if you have emergency medical information to share, or if you need special arrangements in case the building must be evacuated, please inform the instructor immediately. Please see the instructor privately after class or in his/her office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins 127 or 131 or by phone: 694-6751 (Voice/TTY) or 539-7153.

D. Other Policies:

Some exams are to be taken at the Testing Center at Pellissippi State. Policy requires that you have a photo ID to take a test in the Testing Center. Children are not allowed in the Testing Center. For location, hours, etc., refer to the Testing Center web site.

If you are taking this course at a distance and cannot come to the Pellissippi State Testing Center, it will be your responsibility to make arrangements for a proctored exam. Contact your instructor to discuss this matter.

Facilities: Students must have a valid Pellissippi ID to be presented on demand to gain access to Pellissippi facilities.

Hardware/Software Requirements for this Course

IBM-type criteria:

Hardware:

- Intel Pentium 4, Intel Centrino, Intel Xeon, or Intel Core Duo (or compatible) processor.
- Microsoft Windows XP with Service Pack 2 or Windows Vista Home Premium, Business, Ultimate or Enterprise (certified for 32-bit editions)
- 1 GB of RAM
- 5 GB of available hard-disk space
- 1024 x 768 monitor resolution with 16-bit video card
- CD-ROM drive (DVD preferred)
- High-speed Internet connection such as cable modem or DSL recommended, if possible
- Speakers

Software:

- Internet Explorer 6.0 (or higher) with Outlook Express
• OPTIONAL: Netscape 7.0 (full installation)

Macintosh criteria:

Hardware:

• PowerPC G4 or G5 or multicore Intel processor
• Mac OS X v.10.4.8
• 1 GB of RAM
• 7 GB of available hard-disk space space
• 1024 x 768 monitor resolution with 16-bit video card
• CD-ROM (DVD preferred)
• High-speed Internet connection such as cable modem or DSL recommended, if possible
• Speakers

Software:

• QuickTime 7.0.4 or better
• Adobe Acrobat Reader 6 or better. Download free from http://www.adobe.com/support/downloads/main.html
• Macromedia Shockwave and Flash players. Download free from http://www.macromedia.com/downloads/

FOR CIW Courses: CD-ROM. Each coursebook includes a supplemental CD-ROM with files that are referenced and used in the course. The labs will refer you to the CD and you will access these and use the files in the course.