

PELLISSIPPI STATE COMMUNITY COLLEGE
MASTER SYLLABUS

XML
WEB 2350

Class Hours: 3.0

Credit Hours: 3.0

Laboratory Hours: 0.0

Revised: Spring 2011

Catalog Course Description:

XML document design teaches students how to create intelligent structured Web documents using the extensible markup language (XML). Students 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). They 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 enable corporations to create consistent structured documents that can be published to a variety of output formats and media. The 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 XP, Vista, or 7.

Prerequisites:

WEB 1600 or CSIT 2645 or equivalent

Textbook(s) and Other Course Materials:

Carey, *New Perspectives on XML*, 2nd Edition: Comprehensive, Course Technology, 2007. ISBN-10: 1418860646

Supplementary Materials (software): 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 (either native or Parallels on a Mac).

I. Week/Unit/Topic Basis:

Week	Topic
1	Introduction to XML
2	Creating XML Document
3	Working with Namespaces

- 4 Validating XML Documents
- 5 Working with Schema
- 6 Working with Cascading Style Sheets and XML
- 7 Working with Cascading Style Sheets and XML
- 8 Using XML as a Data Source: Data Binding
- 9 Working with XSLT and XPath to transform an XML document
- 10 Working with XSLT & XPATH, cont'd
- 11 Working with DHTML
- 12 Working with XHTML
- 13 Working with the Document Object Model (DOM)
- 14 The AJAX Web Application Model
- 15 Final Exam

II. Course Goals*:

The course will:

- 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. Expected Student Learning Outcomes*:

The student will 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)

* Capital letters after Expected Student Learning Outcomes reference the course goals listed above.

IV. Evaluation:

A. Testing Procedures:

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:

N/A

C. Field Work:

N/A

D. Other Evaluation Methods:

- Projects/Assignments: 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.
- 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:

A	90-100 Points
B+	85-89

B	80-84
C+	75-79
C	70-74
D	60-69
F	0-59

V. Policies:

A. Attendance Policy:

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning courses) must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of the Learning Division, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of Academic Affairs.

B. Academic Dishonesty:

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices:

- Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments.
- Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services, without proper documentation of the original source.
- Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one's own work.
- Taking an exam for another student.
- Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
- Any of the above occurring within the Web or distance learning environment.

C. Accommodations for disabilities:

Students who need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his 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, 132, 134, 135, 131 or by phone: 539-7153 or TTY 694-6429. More information is available at <http://www.pstcc.edu/sswd/>.

D. Other Policies:

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

Software:

- Internet Explorer 6.0 (or higher) with Outlook Express
- XMLSpy, download instructions to be provided by the instructor
- Adobe Acrobat Reader 6.0 or better. Download free from <http://www.adobe.com/support/downloads/main.html>

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

Software:

- You must have the ability to run Windows, e.g.. using Parallels or Fusion, on your Mac (XML Spy is only available for Windows)
- XMLSpy, download instructions to be provided by the instructor
- 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/>