CS 50.15A Course Outline as of Spring 2011

CATALOG INFORMATION

Dept and Nbr: CS 50.15A Title: INTRO TO XML 1
Full Title: Introduction to XML 1
Last Reviewed: 11/8/2010

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.50	Lecture Scheduled	1.50	17.5	Lecture Scheduled	26.25
Minimum	1.50	Lab Scheduled	0	4	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	1.50		Contact Total	26.25
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 52.50 Total Student Learning Hours: 78.75

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

Catalog Description:
This course introduces students to the Extensible Mark-up Language (XML). Students will learn how XML can be used to define industry specific Internet mark-up languages such as HTML (Hypertext Markup Language). Students will be given projects requiring research, implementation and deployment of valid XHTML web pages created with XML applications that are linked to CSS (Cascading Style Sheets).

Prerequisites/Corequisites:
Course Completion of CS 50.11B (or CIS 58.51B)

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: This course introduces students to the Extensible Mark-up Language (XML). Students will learn how XML can be used to define industry specific Internet mark-up languages such as HTML (Hypertext Markup Language). Students will be given projects requiring research, implementation and deployment of valid XHTML web pages created with XML

applications that are linked to CSS (Cascading Style Sheets). (Grade or P/NP)
Prerequisites/Corequisites: Course Completion of CS 50.11B (or CIS 58.51B)
Recommended: Eligibility for ENGL 100 or ESL 100
Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**			Effective:	Inactive:
CSU GE:	**Transfer Area**			Effective:	Inactive:
IGETC:	**Transfer Area**			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Spring 2011	Inactive:	Fall 2015
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
Upon completion of the course, students will be able to:
1. Produce XHTML documents which will validate error-free according to the W3C (World Wide Web Consortium) XHTML validator.
2. Produce XHTML compliant style sheets which will validate error-free according to the W3C CSS validator.
3. Produce short XML applications which will validate error-free according the W3C XML validator.
4. Create well-formed and valid XML documents.
5. Combine XML and CSS to produce valid XHTML documents.
6. Create and utilize simple Document Type Definition (DTD) files.

Topics and Scope:

1. Introduction
   a. The Problem with HTML
   b. The Power of XML
   c. XML Helpers
   d. XML in the Real World
   e. XML Defined
   f. Relationship of HTML and XML
   g. Enhancing HTML with XML
   h. XHTML as a Bridge to XML
2. Writing Well-Formed XML
   a. Rules for Writing XML
   b. Writing Non-Empty Elements

c. Nesting Elements
d. Adding Attributes
e. Using Empty Elements
f. Writing Comments
g. Displaying Tags as Text
h. Errors in XML

3. XML in the Browser: Cascading Style Sheets (CSS)
a. History of Styling HTML
b. Style Sheets and HTML
c. External Styles in HTML
d. Internal XML Style Sheets
e. Using Media in Style Sheets
f. Defining Elements as Block-Level or Inline
g. Layout with CSS
h. Formatting Text with CSS

4. The Document Object Model (DOM)
a. Declaring an Internal DTD (Document Type Definition)
b. Writing an External DTD
c. Naming an External DTD
d. Declaring a Personal External DTD
e. Declaring a Public External DTD

5. Defining Elements and Attributes in a DTD
a. Defining Elements and Element Types
b. Defining Choices
c. Defining How Many Units
d. About Attributes
e. Defining Simple and Unique Value Attributes
f. Referencing and Restricting Attributes

6. Entities and Notations in DTDs
a. Creating Shortcuts for Text
b. Using Shortcuts for Text
c. Shortcuts for Text in External Files
d. Creating and Using Shortcuts for DTDs
e. Creating Entities for Unparsed Content
f. Embedding Unparsed Content

7. XML Schema
a. Simple and Complex Types
b. Local and Global Declarations
c. Beginning a Simple Schema
d. Indicating a Simple Schema's Location
e. Annotating Schemas

8. Defining and Using Simple and Complex Types
a. Declaring an Element with a Type
b. Deriving and Using Custom Simple Types
c. Specifying a Set of Acceptable Values, Pattern and Ranges
d. Limiting a Simple Type
e. Creating List Types
f. Predefining an Element's Content
g. Limiting Elements
h. Defining and Referencing Named Groups
i. Referencing Already Defined Elements
j. Basing Complex Types on Complex Types

k. Defining and Declaring Basic Complex Types
l. Elements with Anonymous Complex Types
m. Declaring and Requiring Attributes
n. Predefining an Attribute's Content
o. Defining and Referencing Attribute Groups

Assignment:

1. Create 1 to 2 Cascading Style Sheets (CSS).
2. Create 2 to 3 XHTML documents.
3. Create 5 to 6 short XML applications.
4. Integrate Style Sheets and XML Applications to produce XHTML documents.
5. Use the W3C XHTML, CSS, and XML validators to test the validity of and correct all class work prior to submission for grading.
6. Use the World Wide Web to locate 3 to 5 on-line XML resources and submit these to a class resource page maintained by the instructor.
7. Complete a web page report on current and/or projected uses of XML for web page developers.
8. Take 2 to 4 quizzes and exams.
9. Read from textbook, 20 to 40 pages per week.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments are more appropriate for this course.	Writing 0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Cascading Style Sheets, XHTML documents, and XML applications, and web-based projects	Problem solving 70 - 80%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None	Skill Demonstrations 0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Quizzes and exams: multiple choice, true/false, short answer	Exams 20 - 30%

Other: Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%

Representative Textbooks and Materials:
Real World XML. Holzner, Steve. Peachpit Press: 2003 (classic)
Learning XSLT. Fitzgerald, Michael. O'Reilly: 2003 (classic)