

College of San Mateo

Course Outline

- New Course
 Update/No change
 Course Revision (Minor)
 Course Revision (Major)

Date: November 14, 2009

Department: CIS

Number: 379

Course Title: Internet Programming: XML Units: 3.0

Total Semester Hours: Lecture: 48 Lab: 16 Homework: 80 By Arrangement: 0

Length of Course

- Semester-long
 Short course (Number of weeks)
 Open entry/Open exit

Grading

- Letter
 Pass/No Pass
 Grade Option (letter or Pass/No Pass)

Faculty Load Credit (To be completed by Division Office; show calculations.): 3.7 FLC

1. **Prerequisite** (Attach Enrollment Limitation Validation Form.)

CIS 111 or CIS 254 or equivalent

2. **Corequisite** (Attach Enrollment Limitation Validation Form.)

None

3. **Recommended Preparation** (Attach Enrollment Validation Form.)

Eligibility for ENGL 838/848

4. **Catalog Description** (Include prerequisites/corequisites/recommended preparation.)

CIS 379 Internet Programming: XML (3) (Pass/No Pass or letter grade option.) 48 lecture and 16 lab hours per term. Prerequisite: CIS 111 or CIS 254 or equivalent. Recommended Preparation: eligibility for ENGL 838/848. Comprehensive course in XML (eXtensible Markup Language). Includes writing well-formed and valid XML, the use of DTDs (Document Type Definitions), XML Schema, RSS, CSS (Cascading Style Sheets), XHTML and XSLT (eXtensible Style Sheet Language Transformation) for formatting; and advanced topics such as XPath and the Document Object Model (DOM). (AA, CSU)

5. **Class Schedule Description** (Include prerequisites/corequisites/recommended preparation.)

CIS 379 Internet Programming: XML (3) Comprehensive course in XML (eXtensible Markup Language). Includes writing well-formed and valid XML, the use of DTDs (Document Type Definitions), XML Schema, RSS, CSS (Cascading Style Sheets), XHTML and XSLT (eXtensible Style Sheet Language Transformation) for formatting; and advanced topics such as XPath and the Document Object Model (DOM). Prerequisite: CIS 111 or CIS 254 or equivalent. Recommended preparation: eligibility for ENGL 838/848. Pass/No Pass or letter grade option. (AA, CSU)

6. **Student Learning Outcomes** (Identify 1-6 expected learner outcomes using active verbs.)

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

1. Develop well-formed and valid XML documents for publishing on the Web.
2. Explain Document Type Definitions (DTDs) and XML Schema (XSD), and illustrate how they are used to validate XML documents for data integrity using XML parsers.
3. Employ Cascading Style Sheets (CSS) and the eXtensible Style Sheet Language (XSL, XSLT) to render XML or to transform XML documents into XHTML files.
4. Explain XPath and the Document Object Model and discuss their relationship to XML.
5. Create a multi-file project using XML, DTD, RSS, CSS, XSD, XSL, and XHTML file types.

7. **Course Objectives** (Identify specific teaching objectives detailing course content and activities. *For some courses, the course objectives will be the same as the student learning outcomes. If this is the case, please simply indicate this in this section).*

See Student Learning Outcomes

8. **Course Content** (Brief but complete topical outline of the course that includes major subject areas [1-2 pages]. Should reflect all course objectives listed above. In addition, you may attach a sample course syllabus with a timeline.)

See attached topical outline

9. **Representative Instructional Methods** (Describe instructor-initiated teaching strategies that will assist students in meeting course objectives. Include examples of out-of-class assignments, required reading and writing assignments, and methods for teaching critical thinking skills.)

The course will include the following instructional methods as determined appropriate by the instructor:

- Lecture will be used to introduce new topics;
- Teacher will model problem-solving techniques;
- Class will solve a problem together, each person contributing a potential "next step";
- Students will participate in short in-class projects (in teacher-organized small groups) to ensure that students experiment with the new topics in realistic problem settings;
- Teacher will invite questions AND ANSWERS from students, generating discussion about areas of misunderstanding;
- Teacher will create and manage an Internet conference for discussion of course topics; and
- Students will work in small groups to solve programming assignments.

10. **Representative Methods of Evaluation** (Describe measurement of student progress toward course objectives. Courses with required writing component and/or problem-solving emphasis must reflect critical thinking component. If skills class, then applied skills.)

- Bi-weekly quizzes (short answer--from textbook material) to provide feedback to students and teacher on objectives 1 - 4;
- Assessment of student contributions during class discussion and project time to assess objectives 1-4;
- Individual programming assignments to assess objectives 1-5;
- Midterm and Final exams (short answer (textbook material), general problem solving (similar to in-class work), short program segments (similar to programming assignments)) to assess objectives 1-5;

- Assessment of group participation on course projects, including peer-assessment of participation and contribution to the group effort to assess objectives 1-5.

11. **Representative Text Materials** (With few exceptions, texts need to be current. Include publication dates.)

XML: Visual QuickStart Guide, Goldberg, Peachpit Press ISBN 0321559673, 2008

New Perspectives on XML, Carey, Course Technology ISBN 1418860646, 2006

New Perspectives on Creating Web Pages with HTML, XHTML, and XML, Carey, Course Technology, ISBN 0495806404, 2009

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