

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY
SAULT STE. MARIE, ONTARIO



Sault College

COURSE OUTLINE

COURSE TITLE: XML & New Technologies

CODE NO. : CSD316 **SEMESTER:** 6

PROGRAM: Computer Analyst Programmer

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DATE: January 2009 **PREVIOUS OUTLINE DATED:** January 2008

APPROVED: "B. Punch"

CHAIR **DATE**

TOTAL CREDITS: 5

PREREQUISITE(S): CSD315 Web Programming

HOURS/WEEK 4

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I. COURSE DESCRIPTION:

Students will be introduced to the many standards and standards governing bodies affecting historical and current textual markup languages.

Students will explore the history and evolution of web based programming technologies.

Ultimately students will be introduced to the revolutionary, evolutionary XML and XML-related web-enabling application standards. Students will understand the XML language's intended usage, syntax, and functionality. Students will progress from creating simple XML documents, to creating components of, or complete commercial applications rendering web pages with dynamic data content and style.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Describe the characteristics of a generalized markup language.

Potential Elements of Performance:

- Describe the evolution and purpose of markup languages.
- Evaluate RTF as an exemplary markup language.
- Identify and explain the historical perspective of GML.
- Identify and explain the historical perspective of SGML.
- Differentiate between GML and SGML objectives.
- Understand the relationship between GML, SGML and XML

2. Evaluate the historical perspective of markup languages used on the World Wide Web.

Potential Elements of Performance:

- Understand the role of the World Wide Web Consortium (W3C).
- Describe the W3C process of establishing a "recommendation" regarding the use of a markup languages on the Internet
- Describe the evolution of markup languages used on the WWW.
- Describe the role of the Web Browser in relation to markup

languages used on the WWW.

- Identify and explain the historic perspective of HTML.
- Identify and explain the historic perspective of XHTML.
- Describe the similarities between HTML and XHTML.
- Describe the major differences between HTML and XHTML
- Evaluate the W3C recommendations governing XHTML
- Understand why the W3C created XML as an extensible markup language
- Understand the relationship between XHTML and XML

3. **Create and modify simple XHTML documents**

Potential Elements of the Performance:

- Create simple XHTML documents and open them in a browser.
- Read and write document type and namespace declarations.
- Add id and class attributes to an XHTML document.
- Identify the root element in an XHTML document.
- Create lists, add anchors & images to a simple XHTML document.
- Plan and create XHTML documents using div and span attributes.
- Plan and create XHTML documents using table elements.
- Plan and create XHTML forms using the XHTML Strict DTD.

4. **Create and associate Cascading Style Sheets with XHTML documents**

Potential Elements of Performance:

- Separate and apply style using Cascading Style Sheet (CSS) rules.
- Develop CSS declaration blocks, properties, values, and determine cascading order.
- Apply CSS attributes, pseudo-elements, and pseudo-classes.
- Utilize inheritance, attribute selectors, descendant selectors, and substring matching selectors to create efficient CSS.
- Incorporate CSS into web applications, including tables.
- Design and develop with CSS using absolute, relative, and fixed positioning.
- Incorporate space properties for multiple output devices.

5. **Introduction to Extensible Markup Language (XML)**

Potential Elements of Performance:

- Understand when to apply XML to web based applications.
- Develop "well-formed" XML documents as recommended by the W3C.
- Create and validate well-formed XML applications utilizing correct syntax for attributes, sub-elements, PCDATA, CDATA, processing instructions, and entities.
- Determine and incorporate namespace into XML documents.
- Read, key and edit an XML hierarchical structure and document tree.
- Model XML applications and work with an XML parser toward user-centered design and efficient application development.

6. **Introduction to Document Object Module (DOM)**

Potential Elements of Performance:

- Create XML documents based on the DOM hierarchical tree structure.
- Navigate and modify XML documents using DOM.
- Prepare XML documents using DOM nodes root, children and siblings.
- Develop DOM objects to be accessed for data manipulation.
- Work with node properties and methods in simple applications.

7. **Introduction to Wireless Markup Language (WML)**

Potential Elements of Performance:

- Differentiate between web and wireless development.
- Work with WML structure and syntax to create WML applications.
- Determine appropriate tools for development and testing with WML.
- Select and develop with WAP tools from the textbook's companion website.

8. Introduction to MathML (WML)

Potential Elements of Performance:

- Understand mathematical expression issues in a computerized environment.
- Understand considerations for using MathML on Web pages..
- Research examples of math editors and presenters.
- How to use software tools to create mathematical expressions and render them on web pages.

III. REQUIRED RESOURCES/TEXTS/MATERIALS:

Textbook:

Title: New Perspectives - XML (Comprehensive)

Authors: Patrick Carey

Publisher: Thomson Education

ISBN: 1-4188-6064-6

V. EVALUATION PROCESS/GRADING SYSTEM:

The mark for this course will be arrived at as follows:

Written Tests and Quiz	30%
Lab Assignments	50%
Final Projects (1) @ 20	20%
Total	100%

At least 80% attendance required in the labs and lectures.

- Students must complete and pass both the test, assignment and project portion of the course in order to pass the entire course.
- All Assignments must be completed satisfactorily to complete the course.
- Late assignments will not be accepted.
- Makeup Tests are at the discretion of the instructor and will be assigned a maximum grade of 60%.

The following semester grades will be assigned to students:

Grade	Definition	<i>Grade Point Equivalent</i>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
F (Fail)	49% and below	
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field /clinical placement or non-graded subject area.	
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.	
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.	
NR	Grade not reported to Registrar's office.	
W	Student has withdrawn from the course without academic penalty.	

UPGRADING OF INCOMPLETES:

When a student's course work is incomplete or final grade is below 50% There is the possibility of upgrading to a pass when the student meets all of the following criteria:

- 1 The student 's attendance has been satisfactory.
- 2 An overall average of at least 40% has been achieved by semester's end on tests and practical assignments.
- 3 The student has made reasonable efforts to participate in class and maintain the recommended schedule for assigned activities.

The nature of the upgrading requirements will be determined by the instructor And may involve re-testing and/or additional lab assignments.

ATTENDANCE:

Absenteeism will affect the student's ability to succeed in the course. Absences due to medical or other unavoidable circumstances should be discussed with the instructor. The instructor reserves the right to deduct 1% of the final mark for each class missed up to a maximum of 10%. Poor attendance will also affect the upgrading process if a student receives a mark below 50%.

VI. SPECIAL NOTES:

Disability Services:

If you are a student with a disability (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Disability Services office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Communication:

The College considers **WebCT/LMS** as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the **Learning Management System** communication tool.

The professor reserves the right to use other tools and / or techniques that may be more applicable. These other tools and / or techniques for effective communication will be discussed, identified and presented throughout the delivery of the course content

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Code of Conduct*. Students who engage in academic dishonesty will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

Special Notes:

- In order to pass this course the student must obtain an overall **test/quiz** average of 50% or better.

Assignments must be submitted by the due date according to the specifications of the instructor. Late assignments will normally be given a mark of zero. Late assignments will only be marked at the discretion of the instructor in cases where there were extenuating circumstances. Ask for permission from your instructor to hand assignments in late **before** the due date

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit from the program coordinator (or the course coordinator regarding a general education transfer request) or academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question.

Credit for prior learning will also be given upon successful completion of a challenge exam or portfolio.