SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE:	Web Programming		
CODE NO. :	CSD315	**SEMESTER:**	5
PROGRAM:	Computer Programmer/Analyst		
AUTHOR:	Willem de Bruyne		
DATE:	June 2004	**PREVIOUS OUTLINE DATED:**	June 2003
APPROVED:			

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DEAN **DATE**

TOTAL CREDITS:	Six
PREREQUISITE(S):	CSD300
HOURS/WEEK:	Four

I. COURSE DESCRIPTION:

Students will be writing comprehensive Client-Side web based applications using JavaScript technology. Students will learn JavaScript code that will be cross-browser compatible. The course content will focus on ECMAScript Edition 3, which is compatible with recent Web browsers, including Microsoft Internet Explorer 4.0 and later and Netscape 6.0 and later. The course will also focus on the DOM (Document Object Model) specification published by the W3C and presents JavaScript techniques using XHTML-compatible Web pages.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Introduction to JavaScript

Potential Elements of the Performance:

- Study the history of the WWW
- Work with structured Web Pages
- Learn about the JavaScript programming language
- Add structure to your JavaScript programs
- Learn about logic and debugging

2. Data Types and Operators

Potential Elements of the Performance:

- Work with variables
- Study data types
- Use expressions and operators
- Work with strings
- Study operator precedence

3. Functions, Events, and Control structures

Potential Elements of the Performance:

- Study how to use functions to organize your JavaScript code
- Learn how to work with events
- Use if statements, if…else statements, and switch statements to make decisions
- Nest one if statement in another

- Use while statements, do…while statements, and for statements to repeatedly execute code
- Learn how to use continue statements to restart a looping statement

4. The Browser Object Model

Potential Elements of the Performance:

- Study the browser object model
- Work with the Window object
- Study the History, Location, and Navigator objects
- Use JavaScript to refer to windows and frames

5. JavaScript and Forms

Potential Elements of the Performance:

- Study form elements and objects
- Use JavaScript to manipulate and validate form elements
- Learn how to submit and reset forms
- Learn how to validate submitted form data

6. Object Oriented JavaScript

Potential Elements of the Performance:

- Study object-oriented programming
- Learn about the built-in JavaScript objects
- Work with the Array, Date, Math, and Number objects
- Define custom JavaScript objects

7. Debugging JavaScript

Potential Elements of the Performance:

- Study debugging concepts
- Learn how to trace error messages
- Learn how to use comments to locate bugs
- Use the Microsoft Script Debugger
- Study additional debugging techniques

8. Cookies and Security

Potential Elements of the Performance:

- Learn about state information
- Save state information with hidden form fields, query strings, and cookies
- Manipulate strings
- Learn about security issues

9. Introduction to the Document Object Model (DOM)

Potential Elements of the Performance:

- Learn about dynamic Web pages
- Study the Document Object Model (DOM)
- Work with the Image object
- Create animation with the Image object
- Learn how to cache images

10. Dynamic HTML (DHTML)

Potential Elements of the Performance:

- Use JavaScript to modify CSS styles
- Work with CSS positioning
- Create DHTML menus
- Learn how to check for browser compatibility

III. TOPICS:

1. Introduction to Java Script
2. Data types and operators
3. Functions, Events, and Control structures
4. The Browser Object Model
5. JavaScript and Forms
6. Object Oriented JavaScript
7. Debugging JavaScript
8. Cookies and Security
9. Introduction to the Document Object Model (DOM)
10. Dynamic HTML (DHTML)

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

JavaScript 3rd Edition., Thompson Learning, by Don Gosselin

V. EVALUATION PROCESS/GRADING SYSTEM:

Quizzes	4 @ 15%
Assignments	4 @ 8%
Part./Present.	8%
	100%

The following semester grades will be assigned to students:

Grade	Definition	*Grade Point Equivalent*
A+	90 – 100%	4.00
A	80 – 89%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00

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.

VI. SPECIAL NOTES:

Special Needs:
If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 703 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.

Plagiarism:
Students should refer to the definition of "academic dishonesty" in *Student Rights and Responsibilities*. 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.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.