SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE:	**Web Scripting Languages**		
CODE NO. :	**CSD212**	**SEMESTER:**	**2**
PROGRAM:	**All I.T. Studies Students**		
AUTHOR:	**Dennis Ochoski**		
DATE:	**Jan 2017**	**PREVIOUS OUTLINE DATED:**	**Jan 2016**
APPROVED:			
	Corey Meunier **Chair**		**Nov '16** **DATE**
TOTAL CREDITS:	**Four**		
PREREQUISITE(S):	**CSD120**		
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; using JavaScript with well-formed Web pages; work with JavaScript variables and data types and learn how to use the operations that can perform them; add functions, events, and control structures; use the browser object model; ensuring data that is entered into Web forms is correct before sending to the server; use object oriented programming techniques; manipulate data in strings and arrays.

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:

   - Describe the differences between client-side and server-side scripting
   - Understand the components of a JavaScript statement Add basic JavaScript code to your web pages
   - Structure your JavaScript programs

2. Functions, Data Types and Operators

   Potential Elements of the Performance:

   - Use functions to organize your JavaScript code
   - Use expressions and operators
   - Identify the order of operator precedence in an expression

3. Building Arrays and Control structures

   Potential Elements of the Performance:

   - Store data in arrays
   - Use while statements, do/while statements, and for statements to repeatedly execute code
   - Use continue statements to restart looping statements
   - Use if statements, if/else statements, and switch statements to make decisions
   - Nest one if statement in another

4. Debugging and Error Handling

Potential Elements of the Performance:

- Recognize error types
- Trace errors with dialog boxes and the console
- Use comments to locate bugs
- Trace errors with debugging tools
- Write code to respond to exceptions and errors

5. The Document Object Model (DOM) and DHTML

Potential Elements of the Performance:

- Access elements by id, tag name, class, name, or selector
- Access element content, CSS properties, and attributes
- Add and remove document nodes
- Create and close new browser tabs and windows with an app
- Use the setTimeout() and setInterval() methods to specify a delay or a duration
- Use the History, Location, Navigation, and Screen objects to manipulate the browser window

6. Enhancing and Validating Forms

Potential Elements of the Performance:

- Enhance form usability with JavaScript
- Customize browser-based HTML validation
- Implement custom validation to check for errors and display error messages

7. Object Oriented JavaScript

Potential Elements of the Performance:

- Explain basic concepts related to object-oriented programming
- Use the Date, Number, and Math objects
- Define your own custom JavaScript objects

8. Manipulating Data in Strings and Arrays

   Potential Elements of the Performance:

   - Manipulate strings with properties and methods of the String object
   - Create regular expressions and use them to validate user input
   - Manipulate arrays with properties and methods of the Array object
   - Convert between strings and arrays, and between strings and JSON

III. TOPICS:

1. Introduction to Java Script
2. Functions, Data Types and Operators
3. Building Arrays and Control Structures
4. Debugging and Error Handling
5. Introduction to the Document Object Model (DOM)
6. Enhancing and Validating Forms
7. Object Oriented JavaScript
8. Manipulating Data in Strings and Arrays

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

JavaScript: The Web Technologies Series 6th Edition
By Sasha Vodnik and Don Gosselin
ISBN-13: 978-1-305-07844-4

V. EVALUATION PROCESS/GRADING SYSTEM:

Quizzes & Tests	60%
Assignments	40%
	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)	below 50%	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. OTHER EVALUATION CONSIDERATIONS

1. In order to pass this course the student must obtain an overall test/quiz average of **50%** or better, as well as, an overall assignment average of **50%** or better. A student who is not present to write a particular test/quiz, and does not notify the professor beforehand of their intended absence, may be subject to a zero grade on that test/quiz.

2. There will be **no** supplemental or make-up quizzes/tests in this course unless there are extenuating circumstances.

3. Assignments must be submitted by the due date according to the specifications of the professor. Late assignments will normally be given a mark of zero. Late assignments will only be marked at the discretion of the professor in cases where there were extenuating circumstances.

4. Any assignment/projects submissions, deemed to be copied, will result in a **zero** grade being assigned to **all** students involved in that particular incident.

5. It is the responsibility of the student to ask the professor to clarify any assignment requirements.

6. The professor reserves the right to modify the assessment process to meet any changing needs of the class.

VII. SPECIAL NOTES:

Attendance:
Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session. *It is the departmental policy that once the classroom door has been closed, the learning process has begun. Late arrivers may not be granted admission to the room.*

Absences due to medical or other unavoidable circumstances should be discussed with the professor, otherwise a penalty may be assessed. The penalty depends on course hours and will be applied as follows:

Course Hours	**Deduction**
5 hrs/week (75 hrs)	1.0% /hr
4 hrs/week (60 hrs)	1.5% /hr
3 hrs/week (45 hrs)	2.0% /hr
2 hrs/week (30 hrs)	3.0% /hr

Final penalties will be reviewed and assessed at the discretion of the professor.

VIII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located in D2L and on the portal form part of this course outline.