# COURSE OUTLINE: CSD0212 - WEB SCRIPT LANGUAGES

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Approved: Martha Irwin, Chair, Community Services and Interdisciplinary Studies

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| **Course Code: Title** | CSD0212: WEB SCRIPTING LANGUAGES |
| **Program Number: Name** | 1120: COMMUNITY INTEGRATN<br>2090: COMPUTER PROGRAMMER |
| **Department:** | C.I.C.E. |
| **Semesters/Terms:** | 20W |
| **Course Description:** | Students will be writing comprehensive cross-browser compatible client-side JavaScript applications. The course content will focus on using JavaScript to manipulate and enhance well-formed web pages. Students will learn JavaScript syntax and will be introduced to standard datatypes and classes available in modern client environments. They will also be introduced to event handling, first-class functions, and object-based programming using JavaScript prototypes. A significant portion of the course focuses on using the Document Object Model to create dynamic web pages. Students will learn debugging techniques using modern web developer tools. |
| **Total Credits:** | 4 |
| **Hours/Week:** | 4 |
| **Total Hours:** | 0 |
| **Prerequisites:** | CSD0120 |
| **Corequisites:** | There are no co-requisites for this course. |
| **Vocational Learning Outcomes (VLO's) addressed in this course:**<br><br>**Please refer to program web page for a complete listing of program outcomes where applicable.** | **2090 - COMPUTER PROGRAMMER**<br>VLO 1  Use documented solutions to troubleshoot problems associated with software installation and customization.<br>VLO 2  Develop, test, document, deploy, and maintain secure program code based on specifications.<br>VLO 4  Apply knowledge of networking concepts to develop, deploy, and maintain program code. |
| **Essential Employability Skills (EES) addressed in this course:** | EES 1  Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.<br>EES 2  Respond to written, spoken, or visual messages in a manner that ensures effective communication.<br>EES 4  Apply a systematic approach to solve problems.<br>EES 5  Use a variety of thinking skills to anticipate and solve problems.<br>EES 6  Locate, select, organize, and document information using appropriate technology and information systems.<br>EES 9  Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals. |
| **Course Evaluation:** | Passing Grade: 50%, D |

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| Other Course Evaluation & Assessment Requirements: | Quizzes & Tests 60%<br>Assignments 40%<br>100%<br><br>Grade<br>Definition Grade Point Equivalent<br>A+ 90 - 100% 4.00<br>A 80 - 89%<br>B 70 - 79% 3.00<br>C 60 - 69% 2.00<br>D 50 - 59% 1.00<br>F (Fail)below 50% 0.00<br><br>CR (Credit) Credit for diploma requirements has been awarded.<br>S Satisfactory achievement in field /clinical placement or non-graded subject area.<br>U Unsatisfactory achievement in field/clinical placement or non-graded subject area.<br>X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.<br>NR Grade not reported to Registrar`s office.<br>W Student has withdrawn from the course without academic penalty.<br><br>OTHER EVALUATION CONSIDERATIONS<br><br>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.<br><br>2. There will be no supplemental or make-up quizzes/tests in this course unless there are extenuating circumstances.<br><br>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.<br><br>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.<br><br>5. It is the responsibility of the student to ask the professor to clarify any assignment requirements.<br><br>6. The professor reserves the right to modify the assessment process to meet any changing needs of the class. |
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| Books and Required Resources: | JavaScript The Web Warriors Series by Sasha Vodnik and Don Gosselin<br>Edition: 6th<br>ISBN: ISBN-13: 978-1-305-07844-4 |
| Course Outcomes and Learning Objectives: | Upon successful completion of this course, the CICE student, with the assistance of a Learning Specialist will acquire varying levels of skill development relevant to the following learning outcomes: |

| Course Outcome 1 | Learning Objectives for Course Outcome 1 |
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| 1. Introduction to JavaScript | 1.1 Describe the differences between client-side and server-side scripting<br>1.2 Understand the components of a JavaScript statement Add basic JavaScript code to your web pages<br>1.3 Structure your JavaScript programs |
| **Course Outcome 2** | **Learning Objectives for Course Outcome 2** |
| 2. Functions, Data Types and Operators | 2.1 Use functions to organize your JavaScript code<br>2.2 Use expressions and operators<br>2.3 Identify the order of operator precedence in an expression |
| **Course Outcome 3** | **Learning Objectives for Course Outcome 3** |
| 3. Building Arrays and Control structures | 3.1 Store data in arrays<br>3.2 Use while statements, do/while statements, and for statements to repeatedly execute code<br>3.3 Use continue statements to restart looping statements<br>3.4 Use if statements, if/else statements, and switch statements to make decisions<br>3.5 Nest one if statement in another |
| **Course Outcome 4** | **Learning Objectives for Course Outcome 4** |
| 4. Debugging and Error Handling | 4.1 Recognize error types<br>4.2 Trace errors with dialog boxes and the console<br>4.3 Use comments to locate bugs<br>4.4 Trace errors with debugging tools<br>4.5 Write code to respond to exceptions and errors |
| **Course Outcome 5** | **Learning Objectives for Course Outcome 5** |
| 5. The Document Object Model (DOM) and DHTML | 5.1 Access elements by id, tag name, class, name, or selector<br>5.2 Access element content, CSS properties, and attributes<br>5.3 Add and remove document nodes<br>5.4 Create and close new browser tabs and windows with an app<br>5.5 Use the setTimeout() and setInterval() methods to specify a delay or a duration<br>• Use the History, Location, Navigation, and Screen objects to manipulate the browser window |
| **Course Outcome 6** | **Learning Objectives for Course Outcome 6** |
| 6. Enhancing and Validating Forms | 6.1 Enhance form usability with JavaScript<br>6.2 Customize browser-based HTML validation<br>6.3 Implement custom validation to check for errors and display error messages |
| **Course Outcome 7** | **Learning Objectives for Course Outcome 7** |
| 7. Object Oriented JavaScript | 7.1 Explain basic concepts related to object-oriented programming<br>7.2 Use the Date, Number, and Math objects<br>7.3 Define your own custom JavaScript objects |
| **Course Outcome 8** | **Learning Objectives for Course Outcome 8** |
| 8. Manipulating Data in Strings and Arrays | 8.1 Manipulate strings with properties and methods of the String object<br>8.2 Create regular expressions and use them to validate user input |

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| | 8.3 Manipulate arrays with properties and methods of the Array object |
| | 8.4 Convert between strings and arrays, and between strings and JSON |

| **Evaluation Process and Grading System:** | Evaluation Type | Evaluation Weight |
| --- | --- | --- |
| | Labs | 40% |
| | Tests | 60% |

**CICE Modifications:**

**Preparation and Participation**

1. A Learning Specialist will attend class with the student(s) to assist with inclusion in the class and to take notes.
2. Students will receive support in and outside of the classroom (i.e. tutoring, assistance with homework and assignments, preparation for exams, tests and quizzes.)
3. Study notes will be geared to test content and style which will match with modified learning outcomes.
4. Although the Learning Specialist may not attend all classes with the student(s), support will always be available. When the Learning Specialist does attend classes he/she will remain as inconspicuous as possible.

**A.** Further modifications may be required as needed as the semester progresses based on individual student(s) abilities and must be discussed with and agreed upon by the instructor.

**B. Tests may be modified in the following ways:**

1. Tests, which require essay answers, may be modified to short answers.
2. Short answer questions may be changed to multiple choice or the question may be simplified so the answer will reflect a basic understanding.
3. Tests, which use fill in the blank format, may be modified to include a few choices for each question, or a list of choices for all questions. This will allow the student to match or use visual clues.
4. Tests in the T/F or multiple choice format may be modified by rewording or clarifying statements into layman's or simplified terms. Multiple choice questions may have a reduced number of choices.

**C. Tests will be written in CICE office with assistance from a Learning Specialist.**

*The Learning Specialist may:*

1. Read the test question to the student.
2. Paraphrase the test question without revealing any key words or definitions.
3. Transcribe the student's verbal answer.
4. Test length may be reduced and time allowed to complete test may be increased.

**D. Assignments may be modified in the following ways:**

1. Assignments may be modified by reducing the amount of information required while maintaining general concepts.
2. Some assignments may be eliminated depending on the number of assignments required in the particular course.

*The Learning Specialist may:*

1. Use a question/answer format instead of essay/research format
2. Propose a reduction in the number of references required for an assignment
3. Assist with groups to ensure that student comprehends his/her role within the group
4. Require an extension on due dates due to the fact that some students may require additional time to process information
5. Formally summarize articles and assigned readings to isolate main points for the student
6. Use questioning techniques and paraphrasing to assist in student comprehension of an assignment

**E. Evaluation:**

Is reflective of modified learning outcomes.

**NOTE:** Due to the possibility of documented medical issues, CICE students may require alternate methods of evaluation to be able to acquire and demonstrate the modified learning outcomes

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| **Date:** | December 19, 2019 |
| **Addendum:** | Please refer to the course outline addendum on the Learning Management System for further information. |