

Course Objectives/Course Outline
Spokane Community College

Course Title: Frontend Development I
Prefix and Course Number: CIS 114

Course Learning Outcomes:

By the end of this course, a student should be able to:

- Implement basic programming concepts (input, output, conditionals, loops, functions, and basic storage structures) with the JavaScript language
- Capture user web page and browser interaction events
- Research and implement JavaScript documentation
- Interact with the DOM(document object model) using vanilla JavaScript as well as jQuery or other JavaScript library.
- Include and use 3rd party plugins for web page and website enhancement
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Course Outline:

- I. Introduction to JavaScript
 - A. Brief history
 - B. Syntax and conventions
 - C. Scripting in the browser console
 - D. Scripting in a text file
 - E. Logic and debugging
- II. Variables and Operators
 - A. Data types and operators
 - B. Variable declaration and scope
 - i. var, let, const
 - C. Arrays
- III. Control Structures
 - A. Conditional statements
 - i. if, if/else if, nested conditionals, switch, ternary
 - B. Looping structures
 - i. while, do...while, for, nested loops
- IV. JavaScript Core Objects
 - A. Dates
 - B. Math
 - C. Strings and template literals
- V. Functions
 - A. Function declaration
 - B. Function expressions
 - C. Arguments, default parameters, and return values
 - D. Hoisting
 - E. this keyword reference
 - F. Arrow functions
- VI. DOM Manipulation
 - A. DOM collections and interaction

- B. `querySelector()`, `querySelectorAll()`
- C. Working with basic form controls
- D. Modifying web page elements
- VII. Using Events and Event Handlers
 - A. Mouse events
 - B. Keyboard events
 - C. Focus events
 - D. Form events
- VIII. Brief Introduction to Creating Classes
- IX. Introduction to jQuery or current JavaScript library
 - A. Linking to the library
 - B. Syntax
 - C. Selectors
 - D. Actions
 - E. Event handlers
- X. jQuery Visual Effects, Animation and Widgets