



BROWARD COMMUNITY COLLEGE

COURSE OUTLINE

LAST REVIEW: 2003-04

NEXT REVIEW: 2008-09

STATUS: A

COURSE TITLE: CIW: JavaScript Fundamentals

COMMON COURSE NUMBER: CTS1852C

CREDIT HOURS: 2

CONTACT HOUR BREAKDOWN

(per 16 week term)

CLOCK HOURS:

(Voc. Course ONLY)

Lecture: 24

Lab: 8

Clinic:

Other:

PREREQUISITE(S): CGS 1601C

COREQUISITE(S):

PRE/COREQUISITE(S):

COURSE DESCRIPTION: *(600 characters, maximum)*

This CIW certification course teaches developers how to use the features of the JavaScript language and design client-side, platform-independent solutions. Students learn how to write JavaScript programs, script for the JavaScript object model, control program flow, validate forms, animate images, target frames, and create cookies. Students will also understand and use the most popular applications of JavaScript. This course, in combination with COP 1806C, prepares students for the CIW Web Languages certification exams.

UNIT TITLES

- 1: Introduction to JavaScript
- 2: Working with Variables and Data
- 3: Functions, Methods and Events
- 4: Controlling Program Flow
- 5: The JavaScript Object Model
- 6: JavaScript Language Objects
- 7: Developing Interactive Forms
- 8: Cookies and JavaScript Security
- 9: Controlling Frames in JavaScript
- 10: Client-Side JavaScript
- 11: Custom JavaScript Objects



Course Outline CTS1852C

I. Course Overview:

This course teaches students how to write basic JavaScript programs. Beginning with topics as simple as variables, students will develop scripting skills of sufficient complexity to be able to develop interactive forms, client-side applications, and custom JavaScript objects.

II. Units:

Unit 1: Introduction to JavaScript

General Outcome:

1.0 In this unit, students are introduced to JavaScripting.

Specific Learning Outcomes:

Upon successful completion of this unit, students will be able to:

- 1.1 Discuss the Origins of JavaScript
- 1.2 Describe JavaScript Characteristics
- 1.3 Explain Common Programming Concepts
- 1.4 Describe the differences between Java and JavaScript
- 1.5 Develop Server-Side vs. Client-Side Applications
- 1.6 Annotate Code with Comments



Unit 2: Working with Variables and Data

General Outcome:

2.0 In this unit, students learn how to use variable and manipulate data in JavaScript.

Specific Learning Outcomes:

Upon successful completion of this unit, students will be able to:

2.1 Write programs that communicate with the User

2.2 Use Variables

2.3 Use Keywords and Reserved Words

2.4 Write Expressions

2.5 Use Operators

2.6 Use Inline Scripting, Simple User Events, and the *onLoad* and *onUnload* Event Handlers



Unit 3: Functions, Methods and Events

General Outcome:

3.0 In this unit, students learn how to use JavaScript functions, methods, and events.

Specific Learning Outcomes:

Upon successful completion of this unit, students will be able to:

- 3.1 Describe Functions
- 3.2 Explain Methods as Functions
- 3.3 Define a Function
- 3.4 Call a Function
- 3.5 Employ User Events and JavaScript Event Handlers



Unit 4: Controlling Program Flow

General Outcome:

4.0 In this unit, students learn how to use JavaScript control statements.

Specific Learning Outcomes:

Upon successful completion of this unit, students will be able to:

4.1 Use the *if...else* Statement

4.2 Use the *while* Statement

4.3 Use the *for* Statement

4.4 Use the *break* Statement

4.5 Use the *continue* Statement

4.6 Use the *switch* Statement

4.7 Use the *do...while* Statement



Unit 5: The JavaScript Object Model

General Outcome:

5.0 In this unit, students are introduced to the JavaScript Object Model.

Specific Learning Outcomes:

Upon successful completion of this unit, students will be able to:

5.1 Discuss the JavaScript Object Hierarchy Model

5.2 Describe commonly Used Objects

5.3 Explain the *window* Object

5.4 Employ the *with* Statement

5.5 Use the *document* Object

5.6 Use the *image* Object

5.7 Use the *history* Object

5.8 Use the *location* Object

5.9 Use the *navigator* Object



Unit 6: JavaScript Language Objects

General Outcome:

6.0 In this unit, students learn how to use JavaScript objects.

Specific Learning Outcomes:

Upon successful completion of this unit, students will be able to:

- 6.1 Describe JavaScript Language Objects
- 6.2 Use the *String* Object
- 6.3 Discuss additional *String* Object Methods
- 6.4 Evaluate Strings
- 6.5 Use the *Array* Object
- 6.6 Use the *Date* Object
- 6.7 Set and Extract Time Information
- 6.8 Use the *Math* Object



Unit 7: Developing Interactive Forms

General Outcome:

7.0 In this unit, students learn how to develop interactive forms.

Specific Learning Outcomes:

Upon successful completion of this unit, students will be able to:

7.1 Provide an overview of Form Controls

7.2 Refer to *form* Objects

7.3 Use the *form* Object

7.4 Use the *button* Object

7.5 Use the *checkbox* Object

7.6 Use the *text* and *textarea* Objects

7.7 Use the *radio button* Object

7.8 Use the *select* Object

7.9 Explain Form Validation



Unit 8: Cookies and JavaScript Security

General Outcome:

8.0 In this unit, students are introduced to cookies and learn how to use and protect a computer from them.

Specific Learning Outcomes:

Upon successful completion of this unit, students will be able to:

- 8.1 Explain how Cookies are sent
- 8.2 Explain how Cookies are stored
- 8.3 Explain why Cookies are used
- 8.4 Assign a Cookie
- 8.5 Test for Cookie Presence
- 8.6 Clear a Cookie
- 8.7 Control Cookies in the Browser
- 8.8 Discuss Cookies and Passwords
- 8.9 Discuss JavaScript Security Issues



Unit 9: Controlling Frames in JavaScript

General Outcome:

9.0 In this unit, students learn how to control JavaScript frames.

Specific Learning Outcomes:

Upon successful completion of this unit, students will be able to:

- 9.1 Understand Frames and Targets
- 9.2 Target Frames in JavaScript
- 9.3 Change Two or More Frames
- 9.4 Discuss Frames, Functions and Variables
- 9.5 Target Windows
- 9.6 Discuss Windows, Functions and Variables



Course Outline CTS1852C

Unit 10: Client-Side JavaScript

General Outcome:

10.0 In this unit, students learn how to write client-side scripts.

Specific Learning Outcomes:

Upon successful completion of this unit, students will be able to:

10.1 Discuss Image Maps

10.2 Define the Image Map

10.3 Add Script to an Image Map

10.4 Use the *navigator* Object



Unit 11: Custom JavaScript Objects

General Outcome:

11.0 In this unit, students learn how to create custom JavaScript objects.

Specific Learning Outcomes:

Upon successful completion of this unit, students will be able to:

11.1 Discuss the advantages of Custom Objects

11.2 Employ Custom Object Demonstration

11.3 Create a JavaScript Object: The Constructor

11.4 Create an Instance of a Custom Object

11.5 Create Object Methods

11.6 Create Functions for Objects

11.7 Employ complex Custom Objects