# WEBD241



## Course Summary

## Description

**Course Description:** This course expands on the topics that were introduced in Web Development Fundamentals (WEBD121). This course introduces the student to fundamental JavaScript programming concepts such as variables and data, functions, controlling program flow (branching and iterating), the JavaScript object model (window, document, image, history, location, and navigator objects), and JavaScript language objects (String, Array, Date, and Math objects). This course also addresses the development of interactive forms with JavaScript, cookies and JavaScript security, controlling frames with JavaScript, and custom JavaScript objects. Students must have access to Internet Explorer 7 (or higher) or FireFox 39.0 (or higher) software. This course covers the CIW JavaScript Specialist curriculum of the CIW JavaScript Specialist certification. This software is not provided by the course material grant and must be purchased/provided by the student. (Prerequisite: WEBD121)

**Course Scope:**

This course is a study of the concepts and applications of Java Script which enables the students to perform client side processing instead of sending data to the server every time and thereby overloading the server. This improves efficiency of performing commerce on the web. Students will learn about the rudiments of scripting: procedural constructs, branching (if, if-then-else and else-if), iterating (FOR, WHILE, and DO-WHILE). They will learn about the essentials of object-based programming and explore the Document Object Model (DOM) architecture. They will also perform data validations with the help of pre-defined objects such as: String, Data, and Math. Knowledge of Java Script will enable the students to add a large degree intelligence, programming sophistication, and power to web pages that are created with just HTML. The Browser objects in JavaScript enable the application to have a standardized look and feel across browsers. The event driven programming capabilities of JavaScript and the Document Object Model (DOM) enable the developer to build efficient applications on the Web.

## Objectives

After successfully completing this course, you will be able to:

1. Explain the evolution of the World Wide Web (WWW) in terms of the need for scripting languages.
2. Outline the features of scripting languages versus markup languages and programming languages.
3. Explain the JavaScript Security Model (Same Origin Policy, Data Tainting, and Signed Scripts).
4. Apply the rudiment of JavaScript to develop Web applications.
5. Apply the event driven capabilities, forms-based data collection, and persistence features, of JavaScript.
6. Demonstrate use of hierarchy of the Document Object Model (DOM) in JavaScript and use the objects, properties, to build applications on the Web.

7. Examine the concerns of the Section 508 proponents when it comes to the features of JavaScript.
8. Apply the functionality of Browser Objects to standardize the look and feel across browsers.

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# Outline

**Week 1:**

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Topic

Introduction to JavaScript

Learning Objectives

Explain the evolution of the World Wide Web (WWW) in terms of the need for scripting languages.

Readings

Text Readings:

Prosoft Lessons 1

Assignment

Week 1 Forum

Week 1 Assignment: Introduction to JavaScript: Creating a JavaScript Enabled Page (Lab 1-1)

**Week 2:**

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Topic

Working with Variables and Data in JavaScript

Learning Objectives

Outline the features of scripting languages versus markup languages and programming languages.

Readings

Text Readings:

Prosoft Lessons 2

Assignment

Week 2 Forum

Week 2 Assignment: Working with Variables and Data in JavaScript: Role of Variables in JavaScript (Lab 2-6)

**Week 3:**

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Topic

Functions, Methods and Events in JavaScript

Learning Objectives

Apply the event driven capabilities, forms-based data collection, and persistence features, of JavaScript.

Readings

Text Readings:

Prosoft Lessons 3

Assignment

Week 3 Forum

Week 3 Assignment: Functions, Methods and Events in JavaScript: Advantages of Using Functions in JavaScript (Lab 3-2)

**Week 4:**

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Topic

Controlling Program Flow in JavaScript & The JavaScript Document Object Model

Learning Objectives

Apply the rudiment of JavaScript to develop Web applications.

Apply the functionality of Browser Objects to standardize the look and feel across browsers.

Readings

Text Readings:

Prosoft Lessons 4,5

Assignment

Week 4 Forum

Week 4 Assignment: Midterm Project/ Assignment

**Week 5:**

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Topic

JavaScript Language Objects

Learning Objectives

Demonstrate use of hierarchy of the Document Object Model (DOM) in JavaScript and use the objects, properties, to build applications on the Web.

Apply the functionality of Browser Objects to standardize the look and feel across browsers.

Readings

Text Readings:

Prosoft Lessons 6

Assignment

Week 5 Forum

Week 5 Assignment: JavaScript Language Objects: Array Objects in JavaScript (Lab 6-4)

**Week 6:**

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Topic

Developing Interactive Forms with JavaScript

Learning Objectives

Apply the rudiment of JavaScript to develop Web applications.

Readings

Text Readings:

Prosoft Lessons 7

Assignment

Week 6 Forum

Week 6 Assignment: Developing Interactive Forums in JavaScript: Working with Text Boxes, Check Boxes and Buttons (Lab (7-4)

**Week 7:**

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Topic

Cookies and JavaScript Security

Learning Objectives

Explain the JavaScript Security Model (Same Origin Policy, Data Tainting, and Signed Scripts).

Readings

Text Readings:

Prosoft Lessons 8

Assignment

Week 7 Forum

Week 7 Assignment: Cookies and JavaScript Security (Essay)

**Week 8:**

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Topic

Custom JavaScript Objects and Changing X/HTML on the Fly

Learning Objectives

Examine the concerns of the Section 508 proponents when it comes to the features of JavaScript.

Apply the rudiment of JavaScript to develop Web applications.

Readings

Text Readings:

Prosoft Lessons 9,10

Assignment

Week 8 Forum

Week 8 Assignment: Final Project/ Assignment

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# Evaluation

**Reading Assignments**:

Lessons 1-14 in *NewPerspectives on HTML, CSS, and Dynamic HTML, 5th Ed*

**Supplemental Readings:**

Appendices in *NewPerspectives on HTML, CSS, and Dynamic HTML, 5th Ed*

***FORUM***

The Forum assignments for this course are designed to promote interactivity among students and enhance the online learning process. The Forum provides maximum flexibility because you do not have to be online at the same time as another person and you can read what other students have written.

*Forum Timing*: For the forum, you must post your work by midnight on **Thursday**, continue to follow your classmates' posts for the remainder of the week, and post the follow-up peer responses prior to midnight on **Sunday, *except for week one***. Your follow-up posts can add additional insight to a classmate's opinions or can challenge their opinions. Use examples from the readings, or from your own research, to support your views, as appropriate. Be sure to read the follow-up posts to your own posts and reply to any questions or requests for clarification. You are encouraged to conduct research and use other sources to support your answers.

*Required Participation*: Please keep in mind that the forum assignments require you to make at least 1 post to the forum with at least 250 words about the topic and also respond to at least 2 peers' posts with at least 150 words. Please be advised that there will be point deductions if you do not comply with these requirements of the assignment. Each one of you will have a different and unique experience that we can all learn from. Your participation in the Forums unleashes the power of synergy in our classroom. To facilitate this interaction, please be prompt when posting your forum work for each week; this provides time for the others to actively engage in the dialogue. For practical reasons, when you respond to other learners' posts, please start your response by referencing their name. I will read and grade your participation by reading the forum. There is no need to also post your forum work in the assignments area of the classroom. Refer to the forum and the syllabus for more details on grading.

***WEEKLY ASSIGNMENTS***

There will be weekly assignments for this course to reinforce your reading and learning. Students will use Python 3.x to practice programming concepts. Complete the weekly exercises required as stated in the Assignments area; then submit your work in the assignments area of the classroom as required.

**Grading:**

| Name | Grade % |
|---|---|
| Assignments | 48.00 % |
| Week 1 Assignment: Introduction to JavaScript | 8.00 % |
| Week 2 Assignment: Working with Variables and Data in JavaScript | 8.00 % |
| Week 3 Assignment: Functions, Methods and Events in JavaScript | 8.00 % |
| Week 5 Assignment: JavaScript Language Objects | 8.00 % |
| Week 6 Assignment: Developing Interactive Forms with JavaScript | 8.00 % |
| Week 7 Assignment: Cookies and JavaScript Security | 8.00 % |
| Forums | 28.00 % |
| Week 1 Forum | 3.50 % |
| Week 2 Forum | 3.50 % |
| Week 3 Forum | 3.50 % |
| Week 4 Forum | 3.50 % |
| Week 5 Forum | 3.50 % |
| Week 6 Forum | 3.50 % |
| Week 7 Forum | 3.50 % |
| Week 8 Forum | 3.50 % |
| Project/Assignment | 24.00 % |
| Week 4 Assignment: Midterm Project/Assignment | 12.00 % |
| Week 8 Assignment: Final Project/Assignment | 12.00 % |
| Extra Credit | 2.00 % |
| End of Course Survey | 1.00 % |
| Mid Course Survey | 1.00 % |

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# Materials

**Book Title:** Javascript Spec. -Acad. Stud. Guide Volume 1.01-Ebook links provided inside the classroom

**Author:** CIW

**Publication Info:** CIW

**ISBN:** 9780742329287

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**Book Title:** APUS does not supply this software. Students must have access to the required software. The listing can be found at http://apus.libguides.com/bookstore

**Author:** N/A

**Publication Info:** N/A

**ISBN:** N/A

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# Course Guidelines

**Citation and Reference Style**

- Attention Please: Students will follow the APA Format as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

**Tutoring**

- Tutor.com offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours* of tutoring provided by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

**Late Assignments**

- Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. The due date for each assignment is listed under each Assignment.
- Generally speaking, late work may result in a deduction up to 20% of the grade for each day late, not to exceed 5 days.
- As a working adult I know your time is limited and often out of your control. Faculty may be more flexible if they know ahead of time of any potential late assignments.

**Turn It In**

- Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and report instances of potential plagiarism for the student to edit before submitting it for a grade. In some cases professors may require students to use Turnitin.com. This is automatically processed through the Assignments area of the course.

**Academic Dishonesty**

- Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not copy/paste, and always cite.

**Submission Guidelines**

- Some assignments may have very specific requirements for formatting (such as font, margins, etc) and submission file type (such as .docx, .pdf, etc) See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.

**Disclaimer Statement**

- Course content may vary from the outline to meet the needs of this particular group.

**Communicating on the Forum**

- Forums are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting time after which the instructor will grade comments, it is not sufficient to wait until the last day to contribute your comments/questions on the forum. The purpose of the forums is to actively participate in an on-going discussion about the assigned content.
- "Substantive" means comments that contribute something new and hopefully important to the discussion. Thus a message that simply says "I agree" is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.

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# University Policies

Student Handbook

- Drop/Withdrawal policy
- Extension Requests
- Academic Probation
- Appeals
- Disability Accommodations

The mission of American Public University System is to provide high quality higher education with emphasis on educating the nation's military and public service communities by offering respected, relevant, accessible, affordable, and student-focused online programs that prepare students for service and leadership in a diverse, global society.