



Online Educator Academy

Intermediate Web Development Syllabus

Duration: 18 Modules (February 4, 2019 - May 15, 2019)

Days and Times: Mondays and Wednesdays 6pm - 7pm

Price: **\$525**

Description:

Not a total newbie, but need guidance going further into Web Development? Are you currently teaching a coding class and not sure where to take your classes next?

Not to fear! We have you covered!

In this program we will take teachers to the next level of web development with JavaScript. You will learn the following:

- Deeper understanding of computational logic
- Using forms in web applications
- Accessing nested objects and arrays
- Help students visualize their projects and create documentation and portfolios
- How to access open and public data and use it for projects in class
- Assign tasks in group projects and how to grade group projects
- Set timelines for the development cycle
- Create fully functional applications
- Difference between Client-Side and Server-Side development

Classroom Coding Principles

1. Be resourceful
2. Technology is only half the solution
3. Empower learning
4. Encourage perseverance
5. Collaborate and find support
6. Imagination over occupation
7. Make it fun!

The Jr. DevLeague Educator Programs are an innovative, immersive learning approach for teacher training to equip our educators with the foundational knowledge to be able to teach coding in the classroom.



Jr. DevLeague has been operating since 2014 as an after school, intersession and daytime coding program, in areas such as game development, web development, cyber security, and creative coding. With programs offered at Mid Pacific Institute, Waipahu High School, Hawaii Tech Academy, Punahou, Maryknoll, Aikahi Elementary and our own Jr. DevLeague Academy, we are now excited to package up our experiences over the last few years and pass them onto the next generation of coding teachers!

Our mission is for students to receive a relevant, modern, customized education that helps them develop real-world 21st century skills and we want to help you lead the charge.

Our core values reside in investing in people over technology and we prepare our teachers with the ability to leverage free and open source technology that can be implemented into any school regardless of budget or high priced equipment and facilities. No need for expensive equipment, we will give teachers a solution that is affordable and sustainable.

Prerequisites: Foundational knowledge of HTML and CSS. Basic knowledge of JavaScript Fundamentals.

Course Modules

Module 1:

- HTML Refresher
 - Setting up a HTML skeleton
 - Tags, attributes, and properties
- CSS Refresher
 - Selectors
 - Properties
- Advanced HTML and CSS
 - Creating animations
 - Creating transitions
 - Building advanced projects with HTML and CSS

Module 2, 3:

- JavaScript Refresher
 - Variables
 - Data types
 - Conditionals
 - Loops
 - Functions
 - Advanced Logic
- Document Model Object (DOM) Refresher
 - JS DOM Traversal

- Events and callbacks
- HTML DOM Form Elements
 - How to create forms
 - What to do with user input
 - Creating projects with forms for students

Module 4:

- Engineering Development Process
 - Developer Cycle
- Encouraging Group Collaboration
 - Implementing an Agile Environment in the classroom
 - Task management for group projects
 - How to grade group projects

Module 5, 6:

- JavaScript Array Methods
 - Using arrays in applications
 - Accessing nested arrays
 - Best practices
 - Resources

Module 7, 8:

- JavaScript Object Methods
 - What is JSON?
 - Object methods
 - Tips and tricks
 - Best practices
 - Resources

Module 9:

- Using JavaScript Libraries to Simplify Programming
 - Where to find JavaScript libraries
 - How to implement JavaScript libraries in your projects
 - Introduction to jQuery
 - Best practices

Module 10, 11:

- Object Oriented Programming in JavaScript
 - Introduction to object oriented programming
 - Constructor functions
 - Inheritance

Module 12, 13:

- How to work with data in applications
 - What is local storage?
 - When to use local storage
 - Creating browser applications with local storage

Module 14, 15:

- Introduction to APIs
 - What is an API?
 - What do APIs do?
 - How to use APIs with JavaScript
 - Handling the response object

Module 16, 17:

- Introduction to XHR and AJAX
 - What is XHR, XML, and AJAX?
 - Asynchronous programming
 - Using the XHR object to make AJAX requests
 - Best practices
 - Resources

Module 18:

- What happens next?
 - Where to find support
 - What to do after the program
 - Resources available
 - Ongoing support