



Online Educator Academy

Introduction to Web Development Syllabus

Duration: 16 Modules (February 5, 2019 - May 16, 2019)

Days and Times: Tuesday and Thursday 6pm - 7pm

Price: **\$525**

Description:

Have you wanted to introduce coding into your classroom but not sure where to begin?

In this course, we cover the basic knowledge necessary in bringing coding into the classroom. You will learn computational thinking concepts, coding fundamentals, and tools allowing your students to gain understanding and build confidence. By the end of the program, you will be able to effectively teach and implement coding into your curriculum, and equip students with a "can-do" growth mindset.

In this course you will learn:

- Introduction to HTML, CSS, and JavaScript
- Overview of tools used by professionals that can easily be used in a classroom
- How to make building websites and games fun and engaging
- Insight to the industry and methods used in the field
- Basic understanding of how to make a websites viewable to the public
- Shortcuts for hosting a website for students
- How to install and use open source software in the classroom

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 to 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, hardware hacking 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!

With pressure mounting from the White House down to introduce Computer Science into every school, we understand the challenges of introducing coding into schools. The subject matter may seem foreign at first glance and is not an area teachers are usually trained for, making it hard to implement programs into schools.

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 to begin, we will give teachers a solution that is affordable and sustainable.

Prerequisites: No experience necessary. Teachers with a passion and desire to bring coding into the classroom are welcomed. Not a teacher? Don't worry...we can help!! Homeschool parents are welcome to participate!

Course Modules

Module 1:

- Introduction to Web Development
 - What is web development?
 - What is HTML, CSS, JS and why do we use them?
- Understanding the Architecture of the Internet
 - Network basics
 - Domains
 - Web hosting

Module 2:

- Introduction to HTML
 - What is HTML?
 - Coding in HTML
 - Syntax
 - Best practices
 - Resources
 - Creating projects with HTML only

Module 3:

- Introduction to CSS
 - What is CSS?
 - Coding in CSS
 - Syntax
 - Best practices
 - Resources
 - Creating projects with HTML/CSS only
- Advanced CSS
 - Flexbox

Module 4, 5, 6:

- Introduction to JavaScript
 - Variables
 - Data Types
 - Statements
 - Conditionals
 - Functions
 - Arrays
 - Loops
 - Objects
 - Syntax
 - Best practices
 - Resources
 - Projects built with HTML, CSS, and JavaScript
 - Basics of debugging

Module 7, 8, 9:

- Introduction to Document Object Model (DOM)
 - What is DOM?
 - Creating dynamic web applications
 - Building projects and games
 - Best practices
 - Resources
- JavaScript functions with DOM
 - Creating page events
 - Creating advanced logic
 - Handling user interactions

Module 10:

- HTML DOM Form Elements
 - How to create forms



- What to do with user input
- Creating projects with forms for students

Module 11:

- Pair Programming
 - Effective pair programming
 - Grading pair programming

Module 12:

- Code Reviews
 - How to review other's code and what to look out for
 - Best practices

Module 13:

- Implementing programming concepts into curriculum for all subjects not just computer science
 - Non-coding activities
 - Communication activities
- Assessment methods
- Blogging/reflection

Module 14:

- Implementing a digital workspace
 - How to use a digital workspace for effective communication
 - Using team collaboration tools

Module 15:

- Keeping students engaged
 - Project based learning methodology
 - Promoting a growth mindset in the classroom
 - Accountability for student projects and teamwork
 - Workforce readiness
 - Encouraging self-motivation
 - Encouraging creativity and exploration
 - Lifelong learning and keeping up with students

Module 16:

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