

# Web Developer Part-time Foundation Program

## SYLLABUS

### Program Overview

This program is an introduction to web development. Students will gain introductory skills in HTML, CSS, and JavaScript. From there, they will learn the fundamentals of responsive website design. In the second half of the course, students will explore important programming concepts through an introduction to Javascript and jQuery in order to add more dynamic features to their websites.

Upon successful completion of the course, students will be able to build an interactive, responsive website with version control. Students who successfully complete the Web Developer Foundation Program will be eligible to enrol in RED Academy's Front-end Developer professional program.

### Career Opportunities from Completing this Program

This course offers a strong foundational introduction to web development for a range of occupations and career paths where a skill set in navigating technical aspects of web design and development is an asset or requirement. This program is also designed to equip individuals who intend to seek further career-focused training in web development with the foundational knowledge and skills to enrol in higher-level educational programs.

### Course Structure

The evening program classes run from 6:00–9:00pm on Monday and Wednesday. The weekend program classes run from 10:00am–5:00pm. Students who are not able to attend one of their classes are allowed to attend the same class during the alternative time, with advance notice.

### Main Languages & Concepts Covered

- Using a text editor (e.g. Sublime Text, Atom, Text Wrangler Notepad++)
- Git/GitHub
- HTML/CSS
- CSS best practices
- Responsive Web Design

- Web Image editing and optimization (using Photoshop or Gimp)
- Javascript/jQuery
- Ajax
- LESS CSS preprocessor

### **Pre-course Work**

Students are advised to complete the HTML and CSS tutorial on Code Academy prior to commencing the course: <http://www.codecademy.com/en/tracks/web>

Students must also create GitHub and Codepen accounts prior to the start of the course (GitHub usernames must be forwarded to the instructor in advance).

This will take approximately 10 hours to complete.

### **Course Learning Outcomes/Competencies**

Upon successful completion, the student will be able to:

- Code standards-compliant HTML5/CSS
- Use CSS for aesthetic web design including adding colour, changing fonts, changing backgrounds, adding borders, controlling spacing and for positioning
- Use an image editor for basic image editing and optimizing
- Learn about wireframe tools to assist with planning a webpage layout
- Understand the basics of Git-based version control and how to use GitHub
- Apply responsive web design concepts to websites
- Demonstrate the use of web fonts, icon fonts, app icons and favicons
- Write basic JavaScript and jQuery functions
- Define what the DOM is
- Build HTML form elements
- Understand web hosting fundamentals including domain names, different hosting environments, and FTP
- Use Ajax to fetch data from an external API

### **Graduation Requirements**

Student must successfully complete two small projects in the first half of the course, and a Capstone Project in the second half of the course. Criteria will encompass skills related to each of the course/subjects taught.

### **Attendance**

Students must attend a minimum of 75% of lectures to pass the course.

## Course Learning Objectives

### HTML5 & CSS:

- Master the web's markup language and craft well-structured, semantic HTML.
- Understand what CSS is relation to HTML, and how to use it on a website.
- Style pages to be elegant web experiences for users, and explore adding interactivity via CSS3 transitions.
- Learn about version control and structuring your development environment with Git, as well as how to distribute your code on GitHub.

### RESPONSIVE WEB DESIGN:

- Build websites that flexibly and effortlessly adapt to different device and screen contexts.
- Create user-centric website layouts through wireframes.
- Learn about basic image editing and optimizing using and image editing application.

### PROGRAMMING INTRODUCTION & JAVASCRIPT:

- Discover the basics of programming through pseudo code.
- Learn the basics of programming in Javascript and essentials concepts such as variables, loops, functions, and arrays.
- Create forms elements and apply event handlers

### ADVANCED TOPICS:

- Bring your websites to life with the jQuery library and learn the basics of interacting with third-party JSON-based APIs using Ajax.
- Learn about the LESS CSS preprocessors and how it can dramatically speed up your development workflow.

## Textbooks

For the Web Developer Essentials course you will be given these reference books:

- JavaScript & jQuery: Interactive Front-end Web Development by Jon Duckett
- HTML & CSS: Design and Build Websites by Jon Duckett

## Course Website

Learning materials for this course may be accessed at: <https://red-wdf.herokuapp.com/>

## Tuition

The Evening/Weekends Program costs \$1,895 for 60 hours of instruction.

A non-refundable deposit of \$250 is required upon acceptance into the course to reserve one's place. Full payment is due three weeks before the start of the course.