BITMAKER
GENERAL ASSEMBLY TORONTO

WEB DEVELOPMENT

COURSE SYLLABUS

PROGRAM DETAILS

LENGTH
12 Weeks

COMMITMENT
Monday to Friday
10am to 6pm

TUITION
$12,500

Launch Your Idea. Start Your Career.

Want to become a professional web developer? This is how it's done. In this intensive, fully immersive 12–week course, we'll teach you everything you need to know to unlock your spot in one of the fastest–growing industries.

Mixing lecture and project–driven learning, students learn a framework to solve real–world problems with code. If you're looking to become a kick–ass Junior Developer, this course will give you the skills you need to jumpstart your career or launch your idea.

After 12 weeks of immersive learning, you'll be ready for your first development job with skills including:

HTML and CSS

The core languages of the web. You'll learn how to structure your site and make it beautiful—starting from scratch. We're not just teaching you how to use templates!

JavaScript

A very popular programming language known for its ability to add interactivity and effects to websites. It also powers cutting–edge application frameworks.

Ruby on Rails

An open source framework written in Ruby, a general–purpose programming languages that is easy to learn for beginners, designed to make building web applications easier.

React

A JavaScript library for building user interfaces maintained by Facebook and used in the web applications for Netflix, PayPal, Airbnb and Uber.

Get Career–Ready

Bitmaker prepares you to thrive in the tech world. Beyond gaining hard skills, students develop confidence, become better communicators, and above all learn that failure is just a step on the path to success.

Resourcefulness
Gain a problem–solver's mindset. Learn to identify what you don't know. Develop your analytical skills.

Communication
The best developers know how to communicate with their team and collaborate to solve problems.

Resilience
If at first you don't succeed, try try again! Programming is about embracing failure and seizing opportunities to learn something new.

COURSE UNITS

Unit 1: Front–End Development and Source Control

Skills: Unix, GitHub, HTML, CSS, Layout and Positioning, Media Queries and Relative Units.

You'll learn the essential Unix commands and the basics of Git and GitHub on the very first day. The rest of the week is devoted to HTML and CSS exercises that teach the fundamentals of front–end development and responsive design. By the end of the week, you'll have completed multiple projects.

Unit 2: Programming Fundamentals & Object–Oriented Design

Skills: Ruby, Data Types, Variables, Flow Control, Collections, Iteration, Methods & Arguments.

Build your first Ruby program and learn the fundamentals of Object-Oriented Design. You'll complete numerous Ruby exercises and by the end of this unit you'll be deeply familiar with all the common data types and frequently used loop structures.

Unit 3: Databases & Web Fundamentals

Skills: SQL, Data Modelling, HTTP, Request Methods, CRUD, Routes, Views & Forms.

Get an introduction to databases by learning fundamental SQL commands and data modelling best practices. You'll also come to better understand how the Internet and its most essential protocols work together.

Unit 4: Web Architecture & Object Relational Mappers

Skills: Routing, Controllers, Views, Models, Migrations, Associations & Authentication.

Extend your database knowledge by building a full application and deploying it to a cloud hosting platform for the world to see. You'll learn how Rails' Model, View, Controller (MVC) architecture is implemented by building a replica of OpenTable, a restaurant reservation booking platform.

Unit 5: Writing Tests

Skills: Testing Best-Practices, Test-Driven Development, Behaviour-Driven Development.

Stretch your understanding of Ruby and Rails by learning how to write tests to evaluate your code and prevent future headaches. We'll teach you the sought–after test driven development (TDD) way to develop software in addition to another pragmatic "test–after" approach.

Unit 6: JavaScript Fundamentals

Skills: JS, Node, Data Types, Variables, Flow Control, Functions, Scope and Closures.

Learn the basics of the JavaScript (JS) language and how it relates to web browsers to add interactivity to your projects. We'll repeat the basic concepts you learned using Ruby in a more syntax–heavy language to extend your familiarity with different programming languages and make you a more versatile developer.

Unit 7: Asynchronous Requests and DOM Manipulation

Skills: Interactive Client-Side Interfaces, AJAX, JSON, Forms, Minification & Pre-Processing.

Become comfortable with adding more interactivity to your application. We'll teach you how to smooth out the incompatibilities between browsers, how to select elements on a webpage that we want to manipulate and, most importantly, how to react to different browser events. Lastly, we'll learn how to send and receive data when we need to using AJAX.

Unit 8: Cumulative Project, Advanced JavaScript & React

Skills: React, JSX, Components, Router & Redux.

You'll have increased freedom to direct your learning in the last two sections of the course. In addition to creating your own minimum viable product (MVP), you'll be able to expand further on your knowledge of JavaScript by building more advanced projects tying all your previous learning together. You'll gain exposure to the React.JS framework, JSX and Redux.

Unit 9: Interview Prep, Remote APIs, Computer Science & Extended Topics

Skills: API Creation & Consumption, Data Structures, Algorithms & NoSQL.

We'll build on the prior career development presentations and assignments that you've completed during the course, by giving you opportunities to practice interviewing. In addition to this, you'll be able to learn how to make your application secure, contribute to open source projects and make your own Ruby Gems. During this time you can also expand on your knowledge further by becoming familiar with computer science fundamentals, API creation & consumption and NoSQL database construction.

Questions? You can reach us at admissions@bitmaker.co