

JavaScript – Platform Game Design

Difficulty: This course assumes no coding experience and is written for beginners.

Objective: To teach students how to code their own browser games. Students will learn to code using JavaScript. They will be able to code their own simple JavaScript game upon completion of course.

Assessments: There's a 5 question quiz at the end of each Lesson. After students complete quiz with 100% correct the next lesson will become available. There is 1 timed test taken in Lesson 10.

Uploads: Students will upload their games in Lesson 2, Lesson 5 & Lesson 10. Their last upload will be their final project.

Length: This course is designed to be one semester worth of content assuming around 2 - 3 hours / week engagement.

Lesson Plan:

Lesson 1: How and Where to Code in JavaScript. Functions & Objects

Lesson 2: Creating and updating variables, collision detection functions, linking various files together.

Lesson 3: Keyboard control functions and object properties for speed and acceleration

Lesson 4: Interval and timeout timers, creating random numbers to control location, speed and starting location of enemies!

Lesson 5: Background music and win screen.

Lesson 6: Animated Character Movements including Running & Jumping.

Lesson 7: Create multiple objects for player to interact, creating an object off of certain keyboard key (shooting a laser).

Lesson 8: Create, Save and Test Game Levels. Bonus Stages.

Lesson 9: Control Background Audio, Customize and Finish Platform Game!

Lesson 10: Upload Live to the Web and add to your coding portfolio!

For their final project students create their very own JavaScript browser game to upload live on the web.

Example: <https://studentportfolio.github.io>