

# Intro to Programming

This Intro to Programming Course will teach you the fundamentals of coding. These topics that are common to all coding languages today: Variables, program flow, data structures, modularisation, functions and how to build basic solutions using these fundamentals. Although we are using JavaScript in this course, the emphasis is not on language, rather on generic coding fundamentals applicable to all coding languages today. Using JavaScript is a bonus because it is the most widely used coding language in the world and used by all other coding environments.

## Prerequisites

None. No Matric required, neither any previous training in computer programming for our Intro to Programming course. If you can pass this [Entry Test](#), you may skip this course before doing any Beginner course like [Beginner Java](#), [Beginner C#](#), [Beginner PHP](#) , [Beginner Python](#) [Beginner C++](#) and more or any of the [Bootcamps](#).

## Intended Audience:

Anybody who has not programmed before and wants to get into programming the right way

## Further Training

All [Coding Bootcamps](#) and Beginner Courses

## Course Material

Provided

## Course Info

## Fundamentals

- The way JavaScript works

- How you're going to write JavaScript
- How to get JavaScript into your page
- Statements
- Variables and values
- Loops
- Conditionals
- When you need to make LOTS of decisions
- Communication with your user
- A closer look at console.log

## **Design, QA**

- Coding a Serious JavaScript Application
- Let's build a game
- First, a high-level design
- Working through the Pseudocode
- Setting up the loop, getting some input
- Doing a little Quality Assurance
- Generating a random number
- Getting functional

## **Functions**

- JavaScript is pass-by-value.
- Weird Functions
- Functions can return things too
- Tracing through a function with a return statement
- Global and local variables
- Scope of local and global variables
- Don't forget to declare your locals!

## **Data Structures**

- Arrays
- How to represent multiple values in JavaScript
- How arrays work
- How to access an array item
- Updating a value in the array.
- How to iterate over an array

- A better way to iterate over an array
- Loop with the post-increment operator
- Creating an array from scratch (and adding to it)

## Objects

- Object Orientation
- How properties work
- How does a variable hold an object?
- Comparing primitives and objects
- Pre-qualification
- Passing objects to functions
- Add behavior to your objects
- When method does not know about a property
- How does behavior alter state

## DOM

- Getting to know the DOM
- How JavaScript really interacts with your HTML page
- Getting an element with getElementById
- What, exactly are we getting from the DOM?
- Finding the inner HTML
- What happens when you change the DOM
- Don't even think about running the code until the page is fully loaded!
- Callbacks
- Setting an attribute with setAttribute (you can GET attributes too)
- So what else is a DOM good for?

## Types

- Serious types
- How to use null
- Dealing with NaN
- Understanding the equality operator (otherwise known as ==)
- How equality converts its operands

- Type conversions
- How to determine if two objects are equal
- Truthy and Falsey

## **Strings**

- How a string can look like a primitive and an object
- String methods (and properties)
- Building an example app from scratch
- How to design the game
- The View
- The Model
- Implementing the model object
- Setting up methods
- The Controller
- Passing the input to the controller

## **Events**

- Handling events
- What are events?
- What's an event handler?
- How to create your first event handler
- Getting your head around events... by creating a game
- Implementing the game
- Assign an event handler to an image's onclick property
- How to reuse the same handler
- How the event object work
- The event object and target
- Events and queues
- How setTimeout works

## **Projects, Exercises, Quizzes and Assessments**

### **Duration and pricing**

[Pricing Group C](#)

### **Certificate**

Read about our [certificates](#)

## **Bookings**

You can download the course registration form on our home page or by clicking [here](#)

## **Brochure**

You may download a pdf copy of this page by clicking on the pdf icon at the top of the page.

## **Questions**

Please [email us](#)

## **Schedule**

On the calendar below. If your browser doesn't display the calendar below, please click on [this link](#) or try using [Google Chrome](#), alternatively please enquire via our [Contact Us](#) page.