# Intro to Programming

➔ Learn programming fundamentals including HTML, CSS, Python, and JavaScript. Ignite your passion for practice and develop the curiosity to experiment with your code.

Powered by:

**U UDACITY**

**RMIT** Online

# Who this course is for

Our Intro to Programming course is ideal for those with no or little programming experience looking to kickstart their career as a web developer.

**DURATION:**
100% online, 16 weeks, with an estimated 10 hours per week.

**PRICE:**
$2,000 GST inc.

**PREREQUISITES / LEVEL OF STUDY:**
None.

**METHOD OF STUDY:**
Online study, including interactive videos, assignments, career services, and course enablement support from our Learner Success team.

**ENROLMENT:**
You can enrol at any time, the whole process only takes a few minutes.

**RMIT** Online

# Why study Intro to Programming

By 2023, it's estimated that there will be over 28 million developers worldwide (SlashData, 2019). Demand for employees with programming skills is booming, with LinkedIn citing that cloud computing and programming are the #2 most in-demand skills for 2020.

Contrary to popular belief, the ability to code isn't just related to the realm of producing front and back end websites. Programming has a plethora of uses, including the creation and maintenance of computer programs and operating systems, mobile apps, data algorithms, and has the capability to make predicative analysis and communicate with machines through artificial intelligence and machine learning.

As there are so many possible uses for programming, learning to code is extremely valuable to your career whether you're just starting out, or looking to develop a new skill. With our Intro to Programming course, you'll equip yourself with the fundamentals of programming that can be applied within your existing role, or can be used boost your career with a new wealth of opportunities.

After completing this course, you'll walk away with your own programming project and an RMIT credential which can be validated, recognised, and shared on social media platforms.



Web, mobile, and software developers are the **#4 most in-demand tech job** for 2020 according to CIO Insights

(CIO, 2020)

Programming roles are expected to see a **23.4% growth rate** in the next five years

(SEEK, 2020)

**RMIT** Online

# How we'll support you

Our Intro to Programming course will be delivered to you in partnership with Udacity, meaning you'll have access to both Udacity's learning and career services as well as RMIT Online's course enablement support through our Learner Success team.

## Udacity's support

Through Udacity, you will get academic support as well as specialised career services, including:

- Mentor support with your course work
- Access to a large student community
- Career coaching and a personalised careers plan
- Interview preparation and advice
- Resume review and optimisation tips
- Course project review and feedback

## RMIT Online's course enablement support

Besides working on your own practical projects and receiving a digital credential from one of Australia's leading universities, our local Learner Success team will be available to support you with course enablement queries relating to:

- Logins and passwords
- Enrolment changes such as deferrals and withdrawals
- Course and project extensions
- Obtaining your RMIT badge
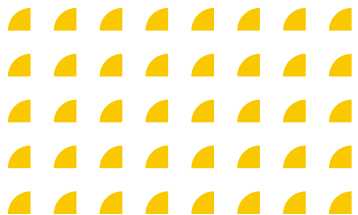
**RMIT** Online

# Why study with RMIT Online

RMIT Online is for students who want real world training from industry professionals. We call this the RMIT Online edge. Get ready to sharpen those skills.

### Digital credential

The cutting-edge skills you'll learn are rigorously assessed and recognised by both a leading university and key employers in the field of study through a digital credential.

### Connect with industry

Through Udacity, you'll get access to some of the industry's top talent, who will be there to support you with course content and career related support.

### Real world skills

Our project-based assessments mean you'll roll up your sleeves and create a project for a real world business scenario, allowing you to see the immediate impact of your learning within your organisation.

### 100% online flexible learning

The freedom of online learning means you can study whenever you want, wherever you want, in a manner that suits your work and lifestyle.

### Collaborative online experience

Never feel like you're studying alone and feel supported with our Learner Success team.

**RMIT** Online

# What you'll learn

## PART 1

## Introduction to HTML

For this section, you will submit your very first programming file containing HTML code. HTML is the coding language for building websites. We recommend taking notes from this section and using your notes as the content for your HTML file. This project is a lab that is auto-graded in the classroom.

Supporting lesson content: Intro to the Web and HTML Basics
> Estimated time: 15 hours

## PART 2

## Introduction to CSS

In this section, you'll learn both HTML and CSS – both languages for developing websites. For the project, you'll use HTML and CSS to make animal trading cards. You will apply your knowledge of HTML document structure to your HTML file and then create custom CSS styling based on your preferences. This project will demonstrate your understanding of linking CSS files in HTML files, implementing CSS classes to avoid repetition, as well create semantically organised HTML code.

Supporting lesson content: HTML Syntax & CSS
> Estimated time: 25 hours

## PART 3

## Introduction to Python

In this section, you will learn the Python programming language. You will finish by building your own interactive game using Python that can be shared with your friends.

Supporting lesson content: Python Programming
> Estimated time: 70 hours

## PART 4

## Introduction to JavaScript

Learn the history of JavaScript and how it compares to Python programming. Understand how the DOM is formed, what Nodes and Elements are, and how to select items from the DOM. By the end, you'll write JavaScript code that allows the user to create a grid of squares representing their design, and apply colors to those squares to create a digital masterpiece.

Supporting lesson content: Introduction to JavaScript
> Estimated time: 50 hours

## PART 5

## What's next?

In this section, there is no project submission. Instead, you will explore a quick overview of the vast world of programming. After this section, you'll have a better understanding of different options you have as a programmer.

Supporting lesson content: Exploration of Udacity Career Tracks
> Extracurricular

# What you'll learn

## Part 1: Introduction to HTML

| Lesson title | Learning outcomes |
|---|---|
| Welcome and Introduction | – Understanding on how to set up for the program on your personal device <br> – Introduction to the "programmer mindset" <br> – Successfully writing and rendering your first lines of HTML code with a text editor and browser |
| Orientation | – Understanding on how to submit projects <br> – Understanding on student support services offered for students <br> – Habits of successful students |
| The World Wide Web | – High level overview on how the web works <br> – Components of the web: browsers, HTTP requests, servers, the internet |
| HTML Basics | – HTML tags <br> – Adding images <br> – HTML syntax <br> – Whitespace <br> – Inline vs block elements <br> – HTML document structure |

RMIT Online

# What you'll learn

## Part 2: Introduction to CSS

| Lesson title | Learning outcomes |
|---|---|
| Adding CSS to HTML | – Understanding CSS basics<br>– Divs, spans, and classes<br>– Semantic tags<br>– Using Devtools in the browser<br>– Verifying HTML and CSS files<br>– Debugging HTML and CSS code<br>– Page structure<br>– Visual styling<br>– Designing with boxes |
| Animal Trading Cards | – Apply what you've learned to create your first code-reviewed project. |

# What you'll learn

## Part 3.1: Introduction to Python

| Lesson title | Learning outcomes |
| --- | --- |
| Turtles & Python | – Write your first lines of Python code using turtles - a visual module that displays colorful rendition of programming |
| Functions – Part 1 | – Learn how to use functions to take an input and transform it into some output<br>– Explore syntax error messages and troubleshoot basic Python code |
| Functions – Part 2 | – Understand the difference between print and return statements<br>– Learn how to manage the flow of a computer program using boolean values, if statements, and while loops |
| Shell Workshop | – Understand and practice working with the Command Line Interface (CLI) |
| Python at Home | – Installing Python and learning Command Line Interface (CLI) basics<br>– Learn how to store values in variables and work with text as strings<br>– Selecting substrings with string Indexing |
| Strings & Lists | – Learn how to store values in variables and work with text as strings<br>– Selecting substrings with string indexing<br>– Use string methods: slicing, concatenation, find, and replace<br>– Use lists to store more complex data<br>– Use for loops to programmatically access each item within a list |
| Version Control with Git | – Learn about the benefits of version control and install version control |
| Working with Files | – Understand how files are created and stored in computer memory<br>– Learn how to list files in a directory, work with filenames, and move and organize files<br>– Learn how to read text from a text file, process that text using string operations, and write text to another text file<br>– Work through some common bugs in text processing |

**RMIT** Online

# What you'll learn

## Part 3.2: Introduction to Python

| Lesson title | Learning outcomes |
| --- | --- |
| Objects & Classes | – Understand the difference between objects and classes in programming |
| | – Define a new class, understand the "self", and defining special methods like initialisers |
| | – Creating instance variables |
| | – Learn about inheritance, super classes, and class variables |

# What you'll learn

## Part 4: Introduction to JavaScript

| Lesson title | Learning outcomes |
|---|---|
| What is JavaScript? | – Understand the history of JavaScript and start writing your code immediately using the JavaScript console |
| Data Types & Variables | – Learn to represent real-world data using JavaScript variables, and distinguish between the different data types in the language |
| Conditionals | – Learn how to add logic to your JavaScript programs using conditional statements |
| Loops | – Harness the power of JavaScript loops to reduce code duplication and automate repetitive tasks |
| Functions | – Dive into the world of JavaScript functions. Learn to harness their power to streamline and organise your programs |
| Arrays | – Learn how to use arrays to store complex data in your JavaScript programs |
| Objects | – Meet the next JavaScript data structure: the object. Learn to use it to store complex data alongside arrays |
| ES6 Syntax | – Learn how to update your code to comply with this major JavaScript update |
| The Document Object Model | – Understand how the DOM is formed, what nodes and elements are, and how to select items from the DOM |
| Creating Content with Javascript | – Use JavaScript and DOM methods to create new page content, update existing content, and delete content |
| Working with Browser Events | – Learn what an event is, how to listen for an event and respond to it, what data is included with an event, and the phases of an event |

RMIT Online

# Extracurricular

## What's next?

| Lesson title | Learning outcomes |
| --- | --- |
| Front End Programming | – Learn about front end web developers who create intuitive and responsive websites |
| Back End Programming | – Learn about back end web programmers who write server-side code to build web apps that serve millions of people worldwide |
| Mobile Programming | – Learn about mobile programming and the differences between iOS and Android programming |
| Data Analysis Programming | – Learn about data analysts who analyse data to direct growth and make informed decisions |

**RMIT** Online

# Who's supporting you

Just because it's online, doesn't mean you're on your own. Through Udacity, you'll get to study with some of the industry's brightest minds who'll support you with course content and your career. At RMIT Online, our Learner Success team will be here to help you with any course activities just as deferrals, obtaining your credential, and more.
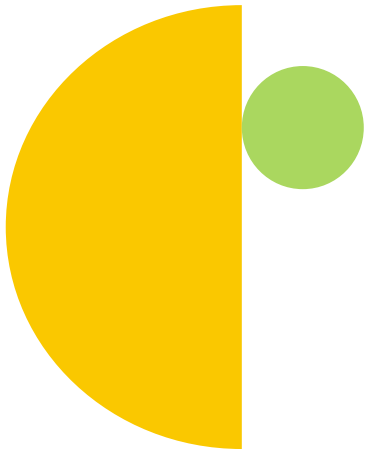
**Learner success team**

Our learner success team are here to help you with 1:1 coaching, tips on how to successfully study online, and any questions or concerns you may have.
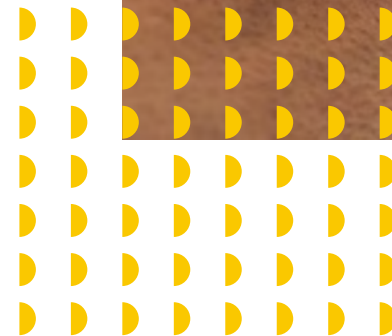
**RMIT** Online

# How online learning works

This is a basic breakdown of how your course works. You can always find more information at online.rmit.edu.au

### Before the course starts

Before we get cracking, you'll need access to a computer with broadband connection. Any 64-bit operating system with at least 8GB of RAM should work.

### During the course

A lot of your course will consist of video snippets. You can watch these whenever you like. For your course projects, you'll get valuable feedback from Udacity's experienced mentors.

Udacity's platform also grants student access to Knowledge, their proprietary wiki, which enables you to search commonly asked questions and get answers from other students.

Your workspace allows you to see your code in action and immediately see their output and quality, with the benefit of being able to run code in a single environment. Udacity also offers a Student Hub, a powerful chat interface that allows you to interact with other students in your course.

### Tools

- Video lectures
- Student Hub
- Workspaces
- Quizzes
- Custom study plan
- Progress tracker

RMIT Online
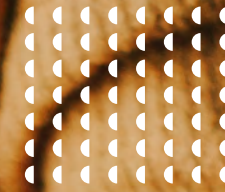
# Enrolment

You can enrol online at any time.
The whole process only takes a few minutes.

**Enrol now** →

For more information about the course, head to our FAQ page.

If you have any questions about payment and enrolment, please get in touch via our contact form, or talk to our team directly **1300 145 032**