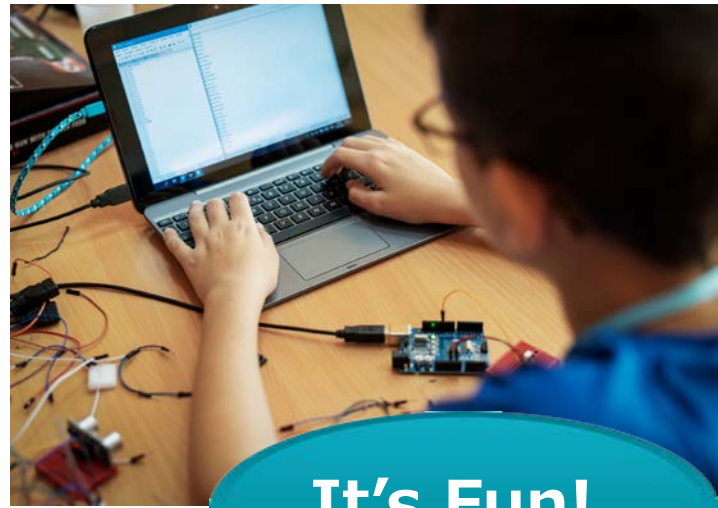
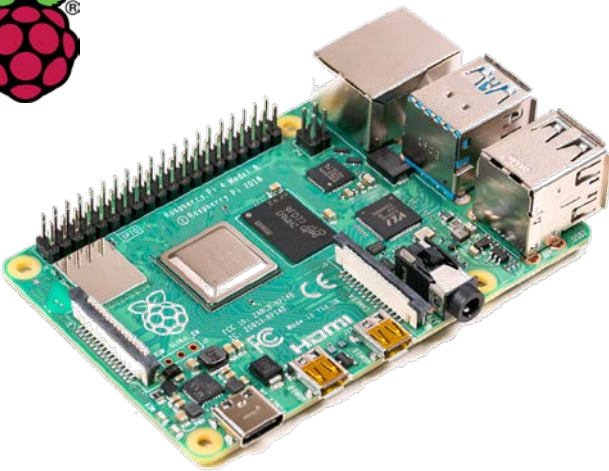




Raspberry Pi Electronics



It's Fun!

of classes

Day

Period

No class dates

Time

Location

Pricing

Minimum & maximum

Let's learn about the Raspberry Pi

This course is an introduction to the Raspberry Pi platform and the use cases. The Raspberry Pi is the best tool to learn electronics, Linux based OS, and a programming language. The Raspberry Pi is a core of the Internet of Things and used for a backend server, a network router, a PC or a Game platform.

✓ **Understand the components** needed to get the Raspberry Pi up and running

- **Hardware components** such as resistors, LEDs, capacitors, and sensors
- **Raspbian OS (Linux)**
- **Python and the libraries**

✓ **Connect sensors, write programs, and control output devices** with the GPIO interface

After this program

Your child will be able to set up a Raspberry Pi system, including hardware components, the operating system, connect sensors and output devices, and control the devices with Python programs. Your child also learns fundamentals of Python programming such as variables, data types, loops, if statements, and functions.

Syllabus (Subject to change)

- 1) Week 1
 - Introduction to the Raspberry Pi Hardware and Peripherals Interface
- 2) Week 2
 - Introduction to the Raspberry Pi Operating System and Python
- 3) Week 3
 - Raspberry Pi board details and GPIO
- 4) Week 4
 - Python programming-1
 - Python introduction
- 5) Week 5
 - Project 1. LED control
- 6) Week 6
 - Python programming-2
 - Input, variables and data types
- 7) Week 7
 - Python programming-3
 - Math operators and import libraries
- 8) Week 8
 - Python programming-4
 - Control flow and comparison operators
- 9) Week 9
 - Project 2. Button & LED
- 10) Week 10
 - Python programming-5
 - While loops and for loops
- 11) Week 11
 - Project 3. RGB LED
- 12) Week 12
 - Project 4. Buzzer (Doorbell)
- 13) Week 13
 - Project 5. Photoresistor & LED (Night Lamp)
- 14) Week 14
 - Project 6. Motor & Driver
- 15) Week 15
 - Project 7. 7-segment display
- 16) Week 16
 - Project 8. Thermometer
- 17) Week 17
 - Project 9. LED Matrix
- 18) Week 18
 - Project 10. Ultrasonic ranging
- 19) Week 19
 - Project 9. RFID
- 20) Week 20
 - Project 20. Hygrothermograph

Prerequisite

No previous electronics or programming experience required.
No equipment required.