Raspberry Pi 101 PRACTICAL
Pi Guy Training

An Introduction to Coding and Electronics on Raspberry Pi Training

Building electronic products is extremely rewarding, whether you do it professionally or just as a hobby. Communica in collaboration with Pi Guy is hosting an Introduction to Raspberry Pi, Coding and Electronics Training Course. This course appeals to anyone eager to learn more about Coding and Electronics on Raspberry Pi, without prior knowledge of programming or electronics. The course will introduce students to the Raspberry Pi basics the basic concepts of coding and electronics and cover the most important coding and electronic components to familiarize them with its operation and usage on Raspberry Pi. Students will then be able to interface different electronics sensors and switch components as required for their own projects onto a Raspberry Pi without damaging this single board computer. The Raspberry Pi 101 is a very practical and hands-on introduction to coding and electronics. We cover a large variety of items during the training session and a high level of concentration is needed.

Target Group
- Training for ages 12 - 85
- Students with an interest in combining coding with electronics and the physical world
- Hobbyists and Professionals looking to learn more about Raspberry Pi, Coding in Python, Internet of Things & Physical Computing

Requirements
- Bring own Mac/Laptop with an Ethernet networking interface.
- No prior knowledge needed.

Cost:
R3,400-00 Per student

Objective
✓ The training course will introduce students to the Raspberry Pi basics, how to get started with Python Coding and how to interact with basic electronic sensors and switches which will enable them to create their own Raspberry Pi and Electronics projects. This will be a massive step forward to become part of the new IOT and Industry 4.0 Smart Factory of Tomorrow.

Includes:
- Certificate of Attendance
- Raspberry Pi 3 Model B + Pi Case + Power Supply
- Pi Guy Electronics HAT, plugs onto your Raspberry Pi
- HAT includes LEDs, Switches, Buzzer, Weather Sensors and Servo Motor
- Fully prepared SDcard (Pi hard drive) with countless code examples
- Network Cable to connect Pi to your laptop
- Students will receive a full-on 80 page training manual
- Manual acts as course guide but also stretches into more advanced topics

Students can bring their own food / cold drinks.
No snack will be provided

**TRAINING ONLY AVAILABLE @
COMMUNICA SAMRAND BRANCH**
HEAD OFFICE - SAMRAND

Communica Building, 53 Landmarks Avenue, Samrand, Centurion

Send your enquiries to
✉ training@communica.co.za

For More Information Call:
☎ 061 940 8143 - Theunis

Learn Raspberry Pi
Create Amazing IoT & Robotic Projects

CODE RASPI & ELECTRONICS
- Workshop -

Free Electronics Pi HAT!

LEARN

BOOK NOW!

Course Content

During the course, you will learn how to build all of the following:

- Sunrise Alarm - beeps as first sunlight enters your room
- Pi Radio FM broadcasting - broadcast short range over FM radio
- Smartphone Remote Control bed lamp or light switch
- Automate opening your electric gate from your smartphone
- Home Entertainment Theater System (movies/music) for your TV
- Control and move a small robotic arm motor
- In-house web-enabled Weather Station

This is what we do in class!

- Get kits and comprehensive 80 page bounded manual
- See array of amazing possibilities on what can be done with Raspberry Pi
- Unpack Pi kit, get your Pi setup (we supply everything)
- Get your Pi going hassle free with the supplied prepared SDcard
- Get to pop on your own Pi Guy HAT electronics board onto your Pi
- Setup your Laptop for easy GUI access to your Pi via realVNC
- Explore the Raspi Graphical User Interface and applications
- Learn the basic 7 principles to Coding in Python
- Explore and write your first own Python script
- Get to understand basic working of switches and LEDs
- Understand Raspi GPIO, General Purpose
- Input Output hardware pins
- Use and get to understand Python script to interact with Electronics via GPIO
- Make a LED train, build your own Traffic Light Controller
- 16 Million RGB LED madness, blink and glow any color
- Make that servo arm move
- Build Web-enabled Weather station (Temperature/Humidity/Light)
- Light intensity and buzzer beeping (Build a sunrise alarm)
- Setup Radio PiFM Broadcasting, your own radio station
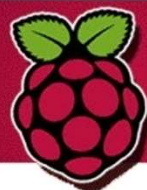
Hardware bundled with the training:

- Network Cable (to connect Pi to laptop)
- SDcard: A Raspbian Micro SD card (OS, examples cod & projects)
- Plug-onto-Pi board called the "Pi Guy HAT"
- Pi Guy HAT is a GPIO IO Sensor/Actuator Electronics Shield (Sense and Do)
- LEDs (Make some light)
- Tactile Switch (Press the button)
- RGB LED (16 Million color variations)
- 1μF Capacitor (Holds potential)
- Piezo Buzzer (Beep a melody!)
- 330 Ω resistors
- DHT11 sensor (Weather sensor, temperature and humidity)
- LDR sensor (Sense Light Intensity)
- Servo motor (Move that arm)
- Female-Female Breakout Cable

BROUGHT TO YOU BY: COMMUNICA — A World Of Electronics

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π PI GUY

Learn Raspberry Pi
Create Amazing IoT & Robotic Projects

RASPBERRY PI

Raspberry Pi is a cheap but powerful credit-card sized computer ideal for learning about:

Computing ▪ Linux ▪ Programming ▪ Electronics
Robotics ▪ Home Automation ▪ Internet of Things
OpenCV Computer Vision ▪ AI & Deep Learning

GET YOUR DIGITAL HANDS DIRTY WITH SOME RASPBERRY PI!
Learn | Fun | Technology | Hands-on | Beginners & Advanced

Raspberry Pi · python Programming for the Raspberry Pi · TensorFlow · Linux

GROW YOUR MIND | FEED YOUR CURIOSITY | EXCITE YOUR SENSES